Network Camera

VB-M700F
VB-M600D/VB-M600VE
VB-M40

Operation Guide

Be sure to read this Operation Guide before using the network camera.

ENGLISH

Introduction

Thank you for purchasing a Canon Network Camera VB-M700F/VB-M600D/VB-M600VE/VB-M40/VB-M40B (hereafter referred to as VB-M700/600/40 or the camera).
The only difference between the VB-M40 and VB-M40B is the exterior color. The VB-M700F, VB-M600D, VB-M40 and VB-M40B are for indoor use only. The VB-M600VE can be installed underneath eaves.
This Operation Guide explains the camera settings and operations. Read this guide carefully before using the VB-M700/600/40 to ensure correct use. Also, be sure to read the files in LICENSE folder on the Setup CD-ROM.

For the latest information on this product (firmware and Bundled Software, User's Manual, operating environment, etc.), please refer to the Canon Web Site.

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The user is responsible for the network security of this product and its use.
Take appropriate network security measures to avoid security breaches.
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<Network Security Recommendations>
– Change the password of the camera periodically.
– Change the HTTP or HTTPS port number of the camera.
– Limit access to the camera by network devices.

Copyright

Videos, images or sounds recorded with your VB-M700/600/40 may not be utilized or published without consent of copyright holders, if any, except in such a way as permitted for personal use under the relevant copyright law.

Notes on Privacy and Publicity Rights Regarding the Use of Video/Audio

When using the VB-M700/600/40 (for video or audio recording), it is the full responsibility of the user to protect privacy and avoid any violation of publicity rights. Canon shall have no liability whatsoever in this regard.

Reference
• Obtain consent from the Administrator before installing the camera to film specific buildings or rooms.

Legal Notice
In some cases, camera monitoring may be prohibited by law or regulation, the details of which differ by country. Before using the VB-M700/600/40, check the laws or regulations of the country or region where the camera is used.

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- SD and SDHC Logos are trademarks of SD-3C, LLC.
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⚠ Warning
To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

Notes on the Bundled Software RM-Lite (Disclaimer)

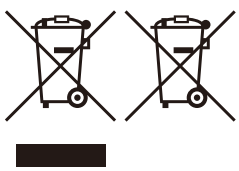
Flaws or other problems with RM-Lite may result in recording failure or destruction or loss of recorded data. Canon shall have no liability whatsoever for any loss or damages incurred by the user as a result of such problems.

Notes on License Agreement for Bundled Software

For information on the License Agreement for Bundled Software, refer to the next file in the BundledSoftware folder in the Bundled Setup CD-ROM LICENSE folder.

Software Type	File Name
VB Initial Setting Tool	VBTools-E.txt
Camera Angle Setting Tool (Not used with the VB-M40.)	
RM-Lite Network Video Recording Software	RM-Lite-E.txt

European Union (and EEA) only.



These symbols indicate that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC), the Battery Directive (2006/66/EC) and/or your national laws implementing those Directives.

If a chemical symbol is printed beneath the symbol shown above, in accordance with the Battery Directive, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Battery Directive.
This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could have a possible impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE.

Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.

For more information about the recycling of this product, please contact your local city office, waste authority, approved scheme or your household waste disposal service or visit www.canon-europe.com/environment.

(EEA: Norway, Iceland and Liechtenstein)

H.264

This product is licensed under AT&T patents for the MPEG-4 standard and may be used for encoding MPEG-4 compliant video and/or decoding MPEG-4 compliant video that was encoded only (1) for a personal and non-commercial purpose or (2) by a video provider licensed under the AT&T patents to provide MPEG-4 compliant video. No license is granted or implied for any other use for MPEG-4 standard. (Notice displayed in English as required.)

Open Source Software

The product (VB-M700/600/40 and bundled RM-Lite) contains Open Source Software modules. For details, see “ThirdPartySoftware-E.pdf” (Third-Party Software License) in the OpenSourceSoftware folder in the LICENSE folder on the Setup CD-ROM. Each module's license conditions are also available in the same folder.

Software under GPL and LGPL

If you would like to obtain the source code under GPL/LGPL, please contact the dealer or sales agent where you purchased the product.

Security Export Control

This product is subject to security export control. Therefore, to export or carry it overseas may require an authorization by governmental agencies.

How to Read This Operation Guide

User's Manuals

This camera comes with the “Installation Guide” and “Operating Guide” (this manual) included in the Setup CD-ROM.

Installation Guide (Bundled)
This guide provides notes and procedures on camera installation as well as the main camera specifications. Sections you should reference in this guide will be marked “Installation Guide” along with the name of the reference items.

Operation Guide (This Document) (VBM467OG_E.pdf)
This document explains the initial camera settings, Admin Tools settings, viewer operations and troubleshooting, etc. This document is included in the Setup CD-ROM.

In the Setup CD-ROM, the recording software RM-Lite (“Network Video Recording Software RM-Lite” in “Chapter1 Before Use”) is also included. The following User’s Manuals are available.

Network Video Recording Software RM-Lite Administrator's Manual (RM10AM_E.pdf)
This document gives a detailed explanation of how to use RM-Lite.

Network Video Recording Software RM-Lite Viewer Operation Guide (RM10VOG_E.pdf)
This is the operation guide for RM-Lite Viewer. For more details on operating procedures for the viewer, see the Administrator's Manual.

How to use this Operation Guide

The assumed reading format of this User's Manual is on a PC screen.

Software Screenshots
The software screenshots shown in these User’s Manuals are illustrative samples only. The screenshots may differ from the actual screens displayed.
Screenshots used with the explanations are generally from a Windows 7 PC connected to the VB-M40.

Camera Specific Information

Camera specific functions will be listed using the icons below, or the camera name will appear in the description of the function.

Icon	Camera Model
M700	VB-M700F
M600	VB-M600D and VB-M600VE
M40	VB-M40

Symbols Indicating Safety Precautions

This section explains marks used in this Operation Guide. This Operation Guide uses the following marks to indicate the important information the user should know in order to use the product safely. Be sure to observe these items.

Mark	Meaning
Warning	Inappropriate handling against the instruction accompanied by this sign may result in death or serious injury. Be sure to observe these warnings to ensure safety.
Caution	Inappropriate handling against the instruction accompanied by this sign may result in injury. Be sure to observe these precautions to ensure safety.
Caution	Inappropriate handling against the instruction accompanied by this sign may result in property damage. Be sure to observe these precautions.
Important	This symbol indicates other actions or information that should be heeded. Important notes and restrictions are provided. Be sure to read this section.
Note	Contains reference information for operation or additional explanations.

Safety Precautions

The following items must be observed when using the VB-M700/600/40.
If they are not observed, injury, death and/or property damage may occur. Read the following information carefully and observe the instructions without fail.

⚠ Important Warnings

Caution
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The AC adapter (optional) can be connected to VB-M700/600/40 from a standard AC power outlet. Please check your instruction manual to make sure that your VB-M700/600/40 is compatible with this adapter.

- The socket-outlet should be installed near the equipment and should be easily accessible.
- Unplug the equipment from the wall outlet before cleaning or maintaining.

FDA regulation

This Network Camera has not been evaluated by the Food and Drug Administration (FDA) for use as a medical device. When incorporated into a system with medical applications, FDA regulations may apply. Therefore, please consult your legal advisor to determine whether FDA regulations apply.

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FCC NOTICE

Network Camera, Model Name: VB-M700/600/40
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.
Canon U. S. A. Inc.
One Canon Plaza, Lake Success, NY 11042, U. S. A.
Tel No. (516) 328-5600

Canadian Radio Interference Regulations

This Class B digital apparatus complies with Canadian ICES-003.

Precautions for Use

⚠ Warning
• If you discover defective conditions such as smoke, strange sounds, heat or strange odors, immediately stop using the camera and contact your nearest dealer. Continued use of the product may cause fire or electric shock.
• Do not disassemble or modify the camera. • Do not spill water or other liquid inside the camera, spray the camera with water, or otherwise wet it. • Do not insert foreign objects into the camera. • Do not use flammable sprays near the camera. • Do not leave LAN cables, external power supplies or AC adapter (optional) power connectors connected when the camera is not in use for long periods. • Do not damage the connecting cable. This may cause fire or electric shock.
• Do not use with medical devices or other life-support systems. Depending on the PC and network environment, high-precision video transmission cannot be guaranteed due to video delay or loss. Canon will assume no liability for any accident or damage resulting from use of the VB-M700/600/40 in the aforementioned devices or systems.

Caution
• Do not capture the sun, halogen lamps, and other very bright light sources or subjects. • Do not expose the camera to strong impact or vibration. • M40 Do not hold the network camera by the head. • M40 Do not forcibly turn the rotating parts of the camera by hand. This may cause malfunction.
This installation should be made by a qualified service person and should conform to all local codes.

Precautions for Use of the Camera Angle Setting Tool

M700 M600

Caution
• The Camera Angle Setting Tool is intended for use during camera installation. Do not use on a daily basis. This may cause malfunction.

Precautions for Use of Built-In Camera Functions and Bundled Software

Caution
• Do not use the built-in camera functions or bundled software listed below in cases requiring a high level of reliability: – Intelligent functions – M40 Image Stabilizer – Network video recording software RM-Lite These features do not guarantee high-precision capture and cannot support applications beyond their intended range of use. Canon will assume no liability for any accident or damage resulting from use of these functions.

Notes on Cleaning

⚠ Warning
• Do not use alcohol, thinner, benzine or any other flammable solvent. This may cause fire or electric shock.

Maintenance

Turn off the power before cleaning the camera.

■ Cleaning of Exterior

1 Dampen a soft cloth with water or diluted neutral detergent and wipe away the grime gently.
2 Wipe with a dry cloth.

■ Cleaning of Lens

Use a commercial lens cleaner to remove grime on the lens surface.

- M40 Auto focus may not work properly if the lens surface is dusty or dirty.
- Be aware that scratches on the lens surface may result in poor image capture.

■ Cleaning of Front Cover, Dome Case, or Dome Housing

Grime on any of the parts listed below will reduce image quality, so periodic cleaning is required.

M700 Front cover
M600 Dome case
M40 Dome (when using the separately sold indoor dome housing)

If the surface of the above parts cannot be cleaned well, remove them following the steps below to clean them more thoroughly.

1 Remove the front cover, dome case, or dome.
M700 See “Using Camera Housing” in the “VB-M700F Installation Guide” to remove the front cover.
M600 See steps in “Installing the Camera” in the “VB-M600D/VB-M600VE Installation Guide” to remove the dome case.
M40 See steps in “Installing the Camera” in the Installation Guide bundled with the indoor dome housing and remove the dome.
2 Dampen a soft cloth with water or diluted neutral detergent and wipe away the grime gently.
3 Wipe with a dry cloth.
4 Reattach the front cover, dome case or dome to its original position.

Periodically check the brackets and screws for rust and loosening to prevent injuries and equipment damage due to falling items.
For inspections, please contact the dealer where you purchased the product.

■ Maintenance for Recessed Mounting Kit (dedicated option for VB-M600D/VB-M600VE) or Ceiling Mount Cover (dedicated option for VB-M40)

Periodically check the brackets and screws for rust and loosening to prevent injuries and equipment damage due to falling items.
For inspections, please contact the dealer where you purchased the product.

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Chapter 1

Before Use

- ❑ Camera Features
- ❑ Software Information
- ❑ Operating Environment and Precautions

Features

This camera integrates both camera and server functions into a compact network camera.

Common Features

Megapixel Support	Equipped with a 1.3 megapixel CMOS sensor, the camera supports high-quality video monitoring.
H.264 Support	In addition to JPEG, the camera supports video compression in H.264 format, which provides high image quality and high compression rates. 1280x960 resolution video can be transmitted to up to 10 clients simultaneously (up to 30 clients for JPEG) in high quality and at a high frame rate of 30 frames per second.*1
Low Illumination Image Capture	The camera can capture color images even with low subject illumination. M700 M600 Minimum subject illumination of 0.25 lux (1/30 sec., with smart shade control OFF) M40 Minimum subject illumination of 0.4 lux (1/30 sec., with smart shade control OFF)
Intelligent Functions	The camera boasts a variety of intelligent functions that offer the wide array of detection options. Moving object detection, abandoned object detection, removed object detection, camera tempering detection, volume detection.
Privacy Masking	You can hide parts of an image with masks to ensure privacy and security. M40 The mask area tracks camera pan, tilt, and zoom operations and moves accordingly.
SD/SDHC Memory Card Support	You can record uploaded images and logs to memory cards when the network is down.
Small-Scale Video Monitoring via RM-Lite Software (Supplied)	By using the supplied network video recording software, RM-Lite, you can record and display live images from up to four cameras.

*1 The actual frame rate may drop depending on the performance of the PC running the Viewer, the number of clients connected at the same time, network load, and other factors.

VB-M40 Features

20x Optical Zoom Lens	The camera is equipped with a 20x optical (4x digital) zoom lens with a maximum 55.4° angle of view and auto focus support.
Pan/Tilt Functions	You can operate camera angle controls remotely.

VB-M700F/VB-M600D/VB-M600VE Features

3x Optical Zoom Lens	The camera is equipped with a 3x motorized optical zoom lens with a maximum 101.2° horizontal angle of view.
Camera Angle Setting Tool	You can make adjustments to the camera angle while viewing video on a PC for hassle-free angle adjustment during installation. M700 Zoom and focus settings are possible. M600 Pan, tilt, rotation, zoom, and focus settings are possible.
Shock Resistant Structure (VB-M600VE only)	The camera is built with a shock absorbing mechanism and an exterior casing made of 3.5 mm-thick (0.14 inch-thick) polycarbonate resin and aluminum alloy. The camera's dome case also uses special screws that cannot be easily removed. * The features described above do not guarantee that the product will be undamaged if subjected to an impact, nor that the product is tamper-proof or tamper-resistant.
Dustproof and Waterproof Mechanisms (VB-M600VE only)	The camera complies with the demanding IP66 dustproof/waterproof specifications and can be installed under eaves without any housing. The optional genuine heater lets you use the camera in low-temperature environments as cold as -30°C (-22°F).

Camera Software

Installed Software

■ VB-M700/600/40 Viewer

(See Chapter 7 "Admin Viewer/VB Viewer")

There are two types of Viewer: the VB Viewer, which can be used by Guest Users, and the Admin Viewer for Administrators.
The VB Viewer allows users to configure basic camera controls and display images.
The Admin Viewer lets you monitor all camera controls and events.
Only JPEG images are displayed. To display H.264 video, install the RM-Lite Viewer (P. 1-5).

■ Admin Tools (See Chapter 6 "Admin Tools")

The following tools for configuring camera settings and performing management functions are available:

- Privacy Mask Setting Tool
- Intelligent Function Setting Tool
- Log Viewer
- M40 Panorama Creation Tool
- M40 View Restriction Setting Tool
- M40 Preset Setting Tool

Bundled Software

The bundled Setup CD-ROM contains the following software. Install the software on a PC to use it.

■ VB Initial Setting Tool

(See Chapter 2 "Initial Settings")

This tool performs initial settings for the camera.

■ Camera Angle Setting Tool M700 M600

(See Chapter 3 "Camera Angle Setting Tool")

With this tool, you can operate the camera during installation while you view video over the network on a PC.

■ RM-Lite (P. 1-5)

This software displays and records images from up to four cameras in real time.

■ Proxy Authentication Admin Viewer/Admin Tools

This software lets you use Admin Viewer/Admin Tools via a proxy server with proxy authentication. It is saved in the ProxyAuthSupport folder on the Setup CD-ROM.

■ SD Card Utility

(See Chapter 8 "SD Memory Card Access")

This tool displays or deletes JPEG images saved on an SD memory card. It can also convert saved images into MOV files and save them to a computer.

Network Video Recording Software (optional)

Additional licenses can be purchased as necessary.

■ RM-64/RM-25/RM-9

This software allows using network cameras for multipoint surveillance, and for displaying, recording and playing back camera video. The number of cameras that can be

registered with RM-64/RM-25/RM-9 varies: 64, 25, or 9 cameras can be registered.

■ RM-Lite-V

This additional license lets you install the RM-Lite Viewer on multiple PCs. Purchase the license to be able to view images captured by the camera from multiple sites and for other similar purposes.

User Support Tool

A convenient tool can be installed for use on a PC.

■ Backup and Restore Tools

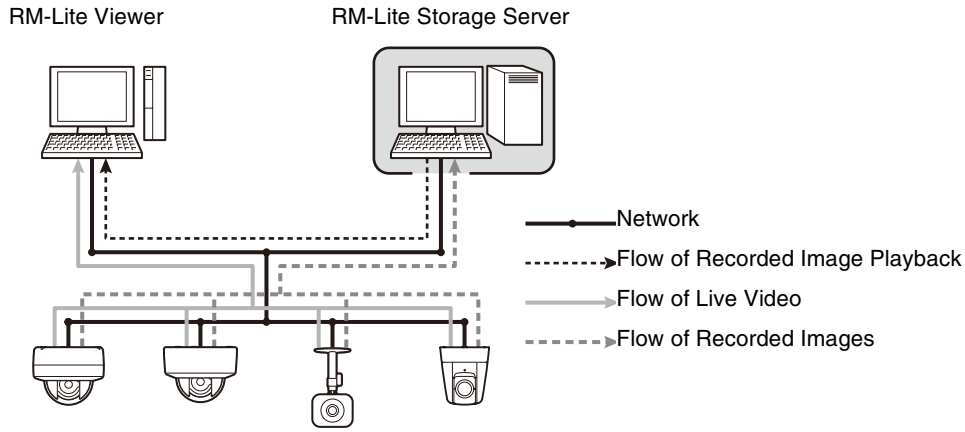
The tools back up camera setting information to the PC. Information from multiple cameras can be saved at the same time.
The tools can also restore information saved on the PC to the camera.

RM-Lite (See the “Administrator's Manual”)

The installer (RMLiteInstall.exe) can be found in the Applications folder on the Setup CD-ROM.

RM-Lite Software Configuration

Type	Overview	License
RM-Lite Storage Server	Up to four cameras can be registered to record video.	1 license
RM-Lite Viewer	Plays recorded video saved in the storage server and displays live images (JPEG/H.264) captured by the camera. Up to four cameras can be registered for the viewer.	1 license



Supported cameras	VB-M700F, VB-M600D, VB-M600VE, VB-M40, VB-C500VD/VB-C500D, VB-C60, VB-C300, VB-C50i/VB-C50iR, VB-C50FSi/VB-C50Fi

Important

- To add the RM-Lite Viewer, purchase RM-Lite-V (optional).
- The VB-M700F/VB-M600D/VB-M600VE/VB-M40 cannot be used with Network Video Recording Software versions older than RM-Lite. Users of VK-64/VK-16 and other legacy software must upgrade to RM-Lite. For details, visit our website.

Note

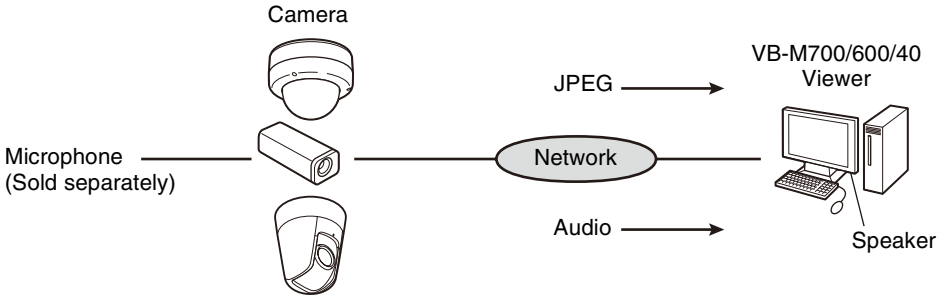
For details on the usage and functions of RM-Lite, see the “Administrator's Manual”.

RM-Lite Viewer and VB-M700/600/40 Viewer Comparison

The RM-Lite viewer differs from the VB-M700/600/40 viewer built into the cameras in the following ways.

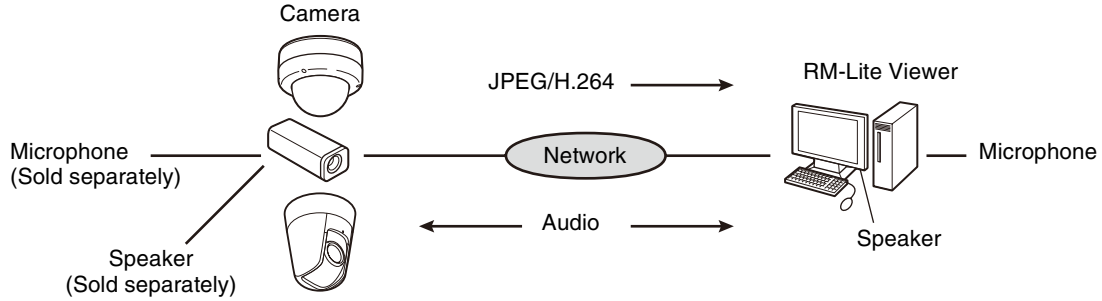
Viewer type	Live image display	Audio
VB-M700/600/40 Viewer	JPEG	Receives audio from the camera (one-way communication)
RM-Lite Viewer	JPEG/H.264	Transmits/receives audio (two-way communication)

VB-M700/600/40 Viewer



Audio from the microphone connected to the camera can be listened to from the viewer speaker.

RM-Lite Viewer



Audio can be transmitted/received between the camera and viewer.

Note

PC, speaker and microphone sold separately.

Operating Environment

For the latest information on this product (firmware and Bundled Software, User's Manual, operating environment, etc.), please refer to the Canon Web Site.

VB Initial Setting Tool, Camera Angle Setting Tool, VB-M700/600/40 Viewer, Admin Tools

CPU	Intel Core 2 Duo 2.0 GHz or more
Operating Systems	Windows XP Home/Professional SP3 32-bit Windows Server 2003 Standard SP2 32-bit Windows Server 2003 R2 Standard SP2 32-bit Windows Vista Ultimate/Business/Enterprise/Home Premium SP2 32/64-bit Windows 7 Ultimate/Professional/Enterprise/Home Premium 32/64-bit Windows 7 Ultimate/Professional/Enterprise/Home Premium SP1 32/64-bit Windows Server 2008 Standard SP2 32/64-bit Windows Server 2008 R2 Standard 64-bit Windows Server 2008 R2 Standard SP1 64-bit
Web Browser	Internet Explorer 7.0/8.0/9.0 32-bit *1
Memory	2 GB or more
Viewer Display	1024 x 768 or higher
Software	.NET Framework 3.5 SP1 *2
Audio	When using the camera's audio feature, the PC audio support feature is required.

*1 The browser must support JavaScript, XAML browser applications, and IFRAMEs.
The VB Viewer requires cookies.

*2 Must be installed separately on operating systems other than Windows 7 and Windows Server 2008 R2. However, installation is unnecessary if only the VB Viewer will be used.
To install .NET Framework 3.5 SP1, download from the Microsoft Download Center or use the installer in the bundled Setup CD-ROM (Applications folder > DotNetFramework folder > dotnetfx35.exe). When dotnetfx35.exe launches, it will attempt to download a language pack from the internet. If your computing environment is not internet-enabled, after a moment the package will be installed without the language pack. The language pack is not required for operation.

RM-Lite

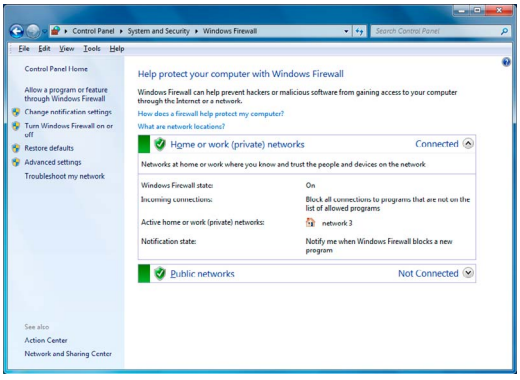
For more operating environment details, refer to “Operating Environment” in the “Administrator's Manual.”

Notes on Operating Environment

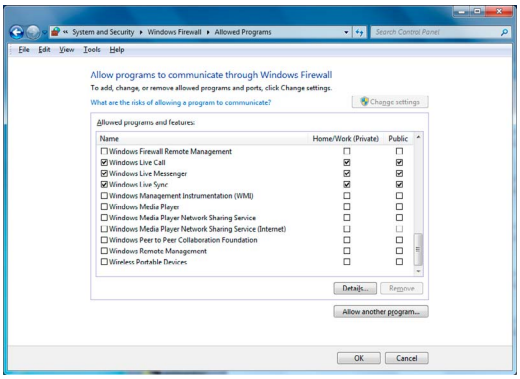
Notes on Use When the [Windows Firewall] Function is Enabled

When the VB Initial Setting Tool is started, the [Windows Security Alert] dialog box may appear.
If the [Windows Security Alert] dialog box appears, click [Unblock].
Once this button is clicked, the warning dialog box will no longer appear.
If the [Windows Security Alert] dialog box does not appear, the Windows firewall warning function may be disabled.
Follow the procedure below to add the [VB Initial Setting Tool] as a Windows Firewall exception.

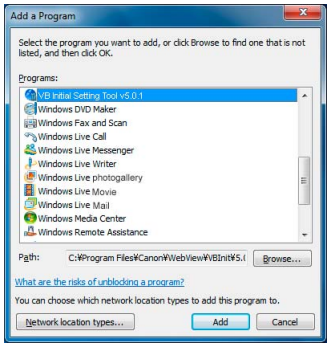
1 Click [Windows Firewall] in [Control Panel] > [System and Security].


Control Panel ▸ System and Security ▸ Windows Firewall
Help protect your computer with Windows Firewall
Home or work (private) networks
Connected
Public networks
Not Connected

2 Click [Allow a program or feature through Windows Firewall] > [Change settings] > [Allow another program].


System and Security ▸ Windows Firewall ▸ Allowed Programs
Allow programs to communicate through Windows Firewall
Allow another program...
OK
Cancel

3 Select [VB Initial Setting Tool], and then click [Add].


Add a Program
Select the program you want to add, or click Browse to find one that is not listed, and then click OK.
Programs:
VB Initial Setting Tool v5.0.1
Windows DVD Maker
Windows Fax and Scan
Windows Live Call
Windows Live Messenger
Windows Live Writer
Windows Live photogallery
Windows Live Movie
Windows Live Mail
Windows Media Center
Windows Remote Assistance
Path:
Browse...
What are the risks of unblocking a program?
You can choose which network location types to add this program to.
Network location types...
Add
Cancel

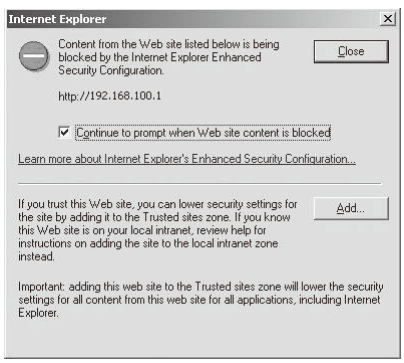
Notes on Use with Windows Server 2003/ Windows Server 2008 and Internet Explorer 9 or Greater

■ Registering the Top Page of the Camera as a Trusted Site

In Windows Server 2003, Windows Server 2008 and Internet Explorer 9 or greater, the security level for Internet sites and intranet sites on Internet Explorer is set to [High] by default. Thus, when accessing the VB-M700/600/40 Viewer or the camera's Setting Page, a content block dialog box appears and the page fails to display correctly.
To correct this problem, follow the procedure below to register the top page as a trusted site.

1 Access the VB-M700/600/40 Viewer and the Setting Page from the top page of the camera with Internet Explorer.

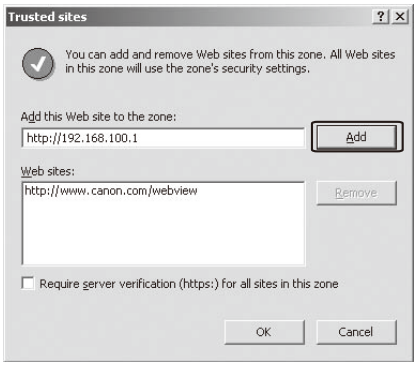
The following dialog box appears.


Internet Explorer
Content from the Web site listed below is being blocked by the Internet Explorer Enhanced Security Configuration.
Close
http://192.168.100.1
Continue to prompt when Web site content is blocked
Learn more about Internet Explorer's Enhanced Security Configuration...
If you trust this Web site, you can lower security settings for the site by adding it to the Trusted sites zone. If you know this Web site is on your local intranet, review help for instructions on adding the site to the local intranet zone instead.
Add...
Important: adding this web site to the Trusted sites zone will lower the security settings for all content from this web site for all applications, including Internet Explorer.

2 Click [Add].

The [Trusted sites] dialog box appears.

3 If selected, clear the [Require server verification (https:) for all sites in this zone] checkbox.


Trusted sites
You can add and remove Web sites from this zone. All Web sites in this zone will use the zone's security settings.
Add this Web site to the zone:
http://192.168.100.1
Add
Web sites:
http://www.canon.com/webview
Remove
Require server verification (https:) for all sites in this zone
OK
Cancel

4 Enter the IP address of the camera under [Add this Web site to the zone], and then click [Add].

For details on registering trusted sites, click the [Learn more about Internet Explorer's Enhanced Security Configuration] in the dialog box in step 1 and read the overview.

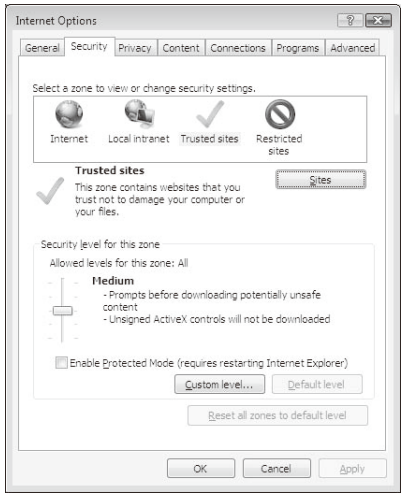
Note that even when the content block dialog box does not appear, JavaScript is sometimes disabled under the standard security settings, which may limit operations on the setting page and the VB-M700/600/40 Viewer.
Register the page as a trusted site as this automatically enables JavaScript settings.
If the content block dialog box does not appear, follow the procedure below to display the [Trusted Sites] dialog box.

1 Click [Tools] > [Internet Options] from the Internet Explorer menu to display the [Internet Options] dialog box.

2 Click the [Security] tab.

3 Click and select [Trusted sites], and then click [Sites].

The [Trusted sites] dialog box appears.

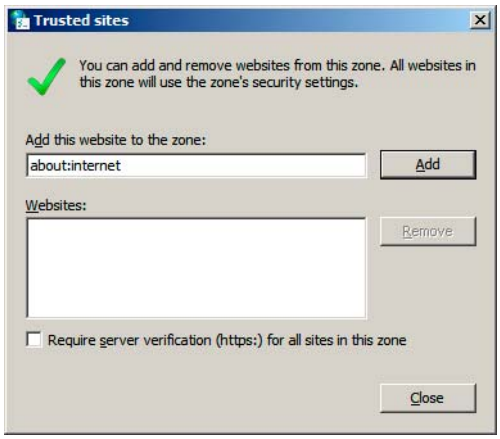


This completes the trusted site registration process.

Notes on Use with Windows Server 2008

■ Registering “about:internet” and the Camera Host Name

Admin Viewer and Admin Tools will not start when IE ESC (Internet Explorer Enhanced Security Configuration) is enabled in Windows Server 2008.
Before using the tools, register “about:internet” and the host name for the connected camera in the Internet Explorer “local intranet” and “trusted sites” lists.


Trusted sites
You can add and remove websites from this zone. All websites in this zone will use the zone's security settings.
Add this website to the zone:
about:internet
Add
Websites:
Remove
Require server verification (https:) for all sites in this zone
Close

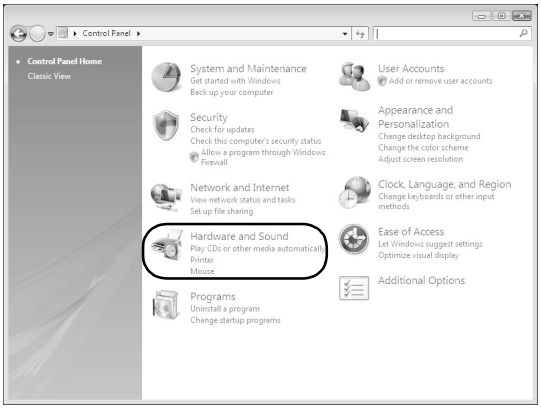
Important

When “about:internet” is registered, the security level in Windows 7 is the same as when using Internet Explorer. After using the Admin Viewer/Admin Tools, it is recommended that you remove “about:internet” and the camera name as necessary and restore the original security level.

■ Enabling the Sound Function to Use Audio

In Windows Server 2008, the sound function is disabled by default.
To receive audio with the Viewer, follow the steps below to enable the sound function.

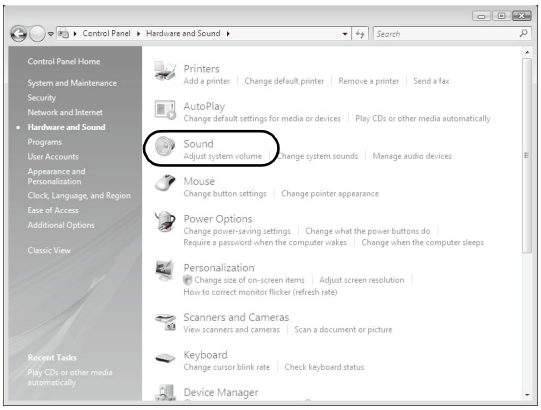
1 Open [Control Panel] and click [Hardware and Sound].



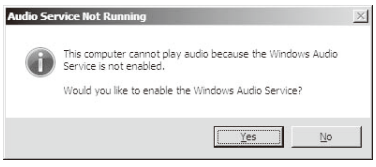
Note

If [Control Panel] is in the classic view, double-click [Sound].

2 Click [Sound].



3 When the [Audio Service Not Running] message appears, click [Yes].


Audio Service Not Running
This computer cannot play audio because the Windows Audio Service is not enabled.
Would you like to enable the Windows Audio Service?
Yes
No

4 The [Sound] dialog box appears.
Click the [Playback] tab to confirm that an audio device has been installed. (If no audio device is installed, refer to your PC manual.)

Notes on Use with Windows Vista/ Windows 7

The following restrictions apply when the camera is used with Windows Vista or Windows 7.

■ RM-Lite

For more important information on the RM-Lite operating environment, see the “Administrator's Manual.”

Chapter 2

Initial Settings

❑ Preparing the Camera for Use
❑ Initial Setting Tool Installation
❑ Initial Settings

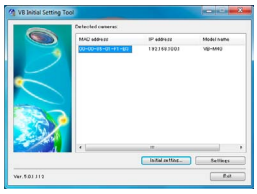
Preparing the Camera for Use

Performing Initial Settings for the Camera

Before installing the camera, read this chapter and use the VB Initial Setting Tool to configure the IP address.

"Installing the VB Initial Setting Tool" (P. 2-4)

"Performing Initial Settings for the Camera" (P. 2-5)



▼

Checking Images

When initial settings are complete, access the camera via a web browser and check the image using the VB Viewer.

"Checking the Camera Image" (P. 2-6)

▼

Installing the Camera

Install the camera to suit the operating environment it will be used in.

"Installation Guide"

▼

Setting the Camera Angle M700 M600

Use the Camera Angle Setting Tool to set the camera angle via PC operation.

"Installing the Camera Angle Setting Tool" (P. 2-4)

"Chapter 3 Camera Angle Setting Tool"

▼

Configuring the Camera from the Setting Page

The setting page lets you configure basic camera settings, network operations, user registration, and access restrictions.

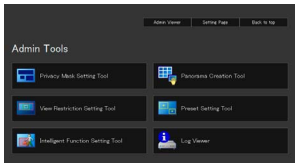
"Chapter 5 Setting Page"

▼

Using Admin Tools

Admin Tools let you set viewing restrictions, make preset settings, and make settings for using intelligent functions. In addition, you can review logs to check on the camera's operation status.

"Chapter 6 Admin Tools"

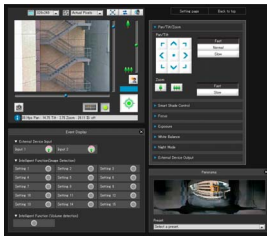


▼

Using VB-M700/600/40 Viewer

The camera's built-in VB-M700/600/40 Viewer features an Admin Viewer for administrators and a VB Viewer for guest users. Use the VB viewer to check distribution to guest users and Admin Viewer to check all operations.

"Chapter 7 Admin Viewer/VB Viewer"

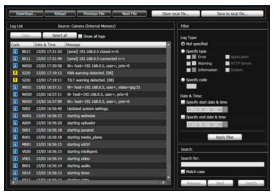


▼

Operating

If an error message appears or the camera fails to operate correctly, see the error message and log message information in "Chapter 8 Appendix".

"Chapter 8 Appendix"



Important

Before starting operations, make sure that the setting page and Admin Tools settings are functioning correctly.

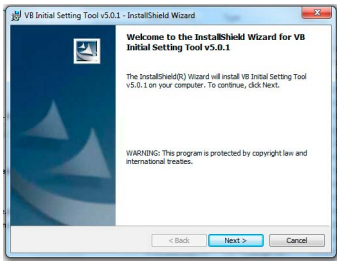
Installing the Necessary Software

Install the VB Initial Setting Tool to perform initial settings for the camera.
M700 M600 Also install the Camera Angle Setting Tool to perform angle adjustments when installing the camera.

Installing the VB Initial Setting Tool

1 Double-click VBInitInstall.exe in the Applications folder on the Setup CD-ROM bundled with the camera.

2 Click [Next] and follow the on-screen instructions to install.


VB Initial Setting Tool v5.0.1 - InstallShield Wizard
Welcome to the InstallShield Wizard for VB Initial Setting Tool v5.0.1
The InstallShield(R) Wizard will install VB Initial Setting Tool v5.0.1 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

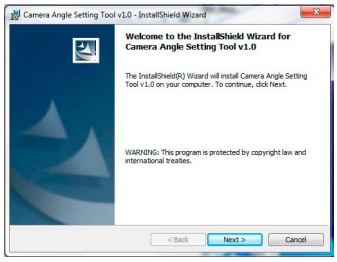
When installation is complete, an icon will appear on the desktop.

Installing the Camera Angle Setting Tool

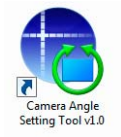
M700 M600

1 Double-click AngleInstall.exe in the Applications folder on the Setup CD-ROM bundled with the camera.

2 Click [Next] and follow the on-screen instructions to install.


Camera Angle Setting Tool v1.0 - InstallShield Wizard
Welcome to the InstallShield Wizard for Camera Angle Setting Tool v1.0
The InstallShield(R) Wizard will install Camera Angle Setting Tool v1.0 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

When installation is complete, an icon will appear on the desktop.



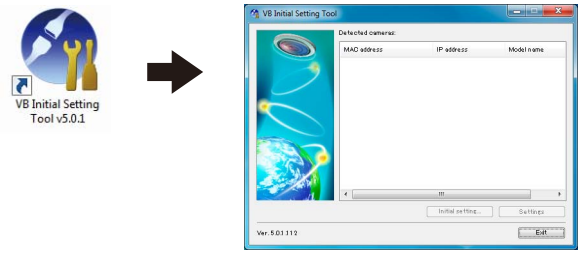
Performing Initial Settings for the Camera

Use the VB Initial Setting Tool to configure the camera network.

1 Connect the camera and PC to the network and turn on the camera (“Connecting the Camera” in the “Installation Guide”).

2 Launch the VB Initial Setting Tool.

To launch the VB Initial Setting Tool, double-click the [VB Initial Setting Tool] icon on the desktop.

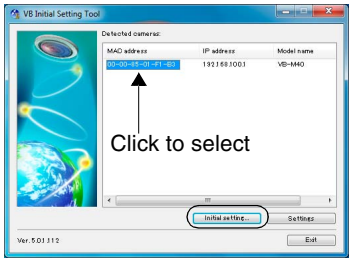


The Tool will automatically detect the camera connected to the network and display the camera's MAC address, IP address and model name.
The factory setting IP address is set to 192.168.100.1.
The MAC address can be found on the label on the camera (“Part Names” in the “Installation Guide”).

Important

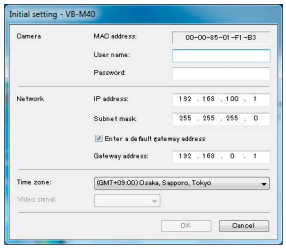
- The camera will stop issuing IP address assignment requests 20 minutes after it is turned on, and the VB Initial Setting Tool detection will be disabled. In such cases, turn the camera off and on again.
- There may be cautionary information, depending on your operating environment. Read “Notes on Operating Environment” (P. 1-8) before performing initial settings.
- The VB Initial Setting Tool cannot be used with cameras that are behind a router.

3 Select a MAC address, and then click [Initial setting].

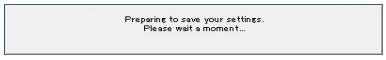


4 Enter the user name “root” and factory default setting password “camera”, and then the appropriate IP address and subnet mask.

To use a setting other than the default gateway setting, clear the [Enter a default gateway address] checkbox.
After settings are complete, click [OK].



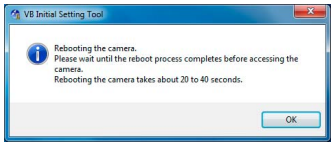
Setup progress is shown in the window.



Note

- To ensure security, be sure to change the administrator password (P. 4-2).
- Contact your System Administrator for the appropriate IP address, subnet mask and gateway address.

5 Click [OK].


VB Initial Setting Tool
Rebooting the camera.
Please wait until the reboot process completes before accessing the camera.
Rebooting the camera takes about 20 to 40 seconds.
OK

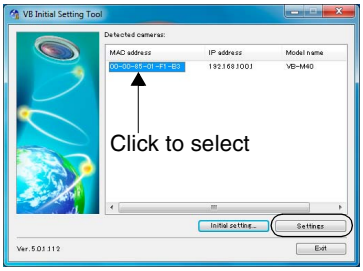
Important

To obtain an IP address from a DHCP server, first use the VB Initial Setting Tool to temporarily configure a static address that can communicate with the PC. Then, in [Network] in the setting page, change [IPv4 Address Setting Method] to [Auto (DHCP)] in the [IPv4] area (P. 5-5).

Checking the Camera Image

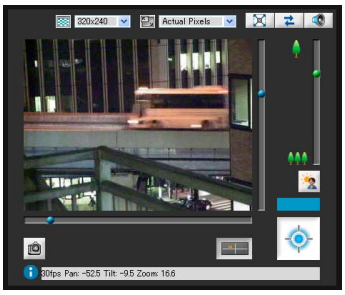
Once initial settings are complete, check the image on the camera with the VB Viewer. When doing so, set the PC network settings to comply with the IP address and subnet mask settings on the camera.

1 Click to select the camera's MAC address which will be checked, and then click [Settings].



2 This will launch the web browser and display the top page of the camera. Click [VB Viewer].

The viewer launches and displays the camera image.



If the top page of the camera does not appear or the VB Viewer does not launch, see “Troubleshooting” (P. 8-6) in “Chapter 8 Appendix.”

Important

- The camera image cannot be checked until the network settings in the PC are configured for the IP address and subnet that are set in the camera.
- Do not change the camera HTTP port from 80 if you want to open the setting page by clicking [Settings]. See “HTTP Server” (P. 5-19) for more information on HTTP port settings.

Chapter 3

Camera Angle Setting Tool

M700 M600

❏ Camera Angle Setting Method
❏ Creating a Camera Specification File to Manage Multiple Cameras

Setting the Camera Angle

Use the Camera Angle Setting Tool to adjust the camera angle when installing the camera or to change the capture orientation according to the situation.

M700 You can set zoom, focus and exposure compensation.

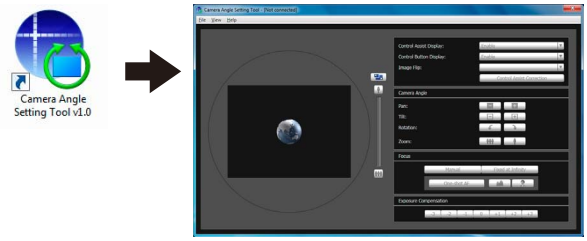
M600 You can set pan, tilt, rotation, zoom, focus and exposure compensation.

Important

- The Camera Angle Setting Tool is bundled for angle adjustment during camera installation only and is not intended for daily use. Overuse may cause the camera to malfunction.
- After changing settings in the Camera Angle Setting Tool, check the settings in the Setting page and Admin Tools operate as intended.
- The Camera Angle Setting Tool cannot be used via a proxy server.
- Upload functions cannot be used while the Camera Angle Setting Tool is connected.

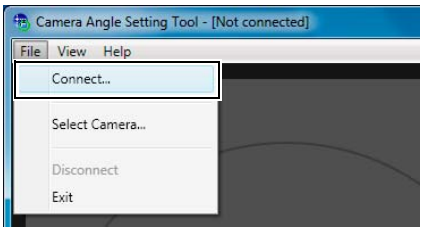
Launching the Camera Angle Setting Tool

1 Double-click the Camera Angle Setting Tool icon on the desktop to launch the Camera Angle Setting Tool.



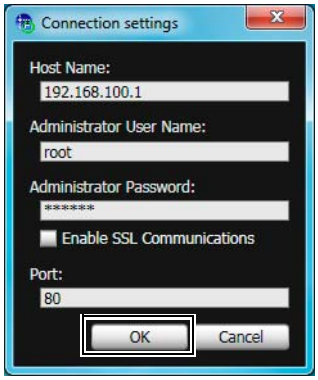
Connecting to the Camera

1 Click [Connect] from the [File] menu.



The [Connection settings] dialog box will appear.

2 Enter each item for the camera to connect to and click [OK].



[Host Name]
Enter the host name or IP address of the camera (P. 2-5).

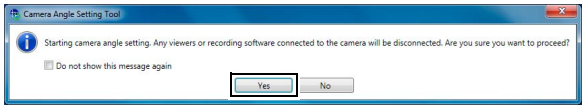
[Administrator User Name]
Enter the administrator user name for the camera (P. 2-5).

[Administrator Password]
Enter the administrator password for the camera (P. 2-5).

[Enable SSL Communications]
Select this checkbox to connect to the camera using SSL communications. Normally SSL communications are not used (factory default setting) (P. 5-29).

[Port]
Set the HTTP port number to 80, 443 or in the range of 1024 to 65535. Normally [80] (factory default setting) is used (P. 5-19).

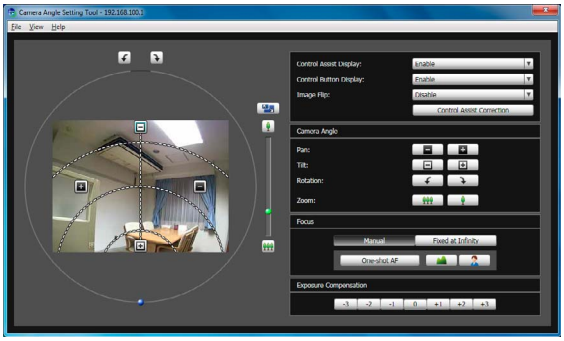
3 Click [Yes] at the following message.


Camera Angle Setting Tool
Starting camera angle setting. Any viewers or recording software connected to the camera will be disconnected. Are you sure you want to proceed?
Do not show this message again
Yes
No

Note

When the Camera Angle Setting Tool connects to a camera, the viewer and recording software connected to the camera are disconnected.

A live camera image from the connected camera will be displayed and the camera angle can be set.



Important

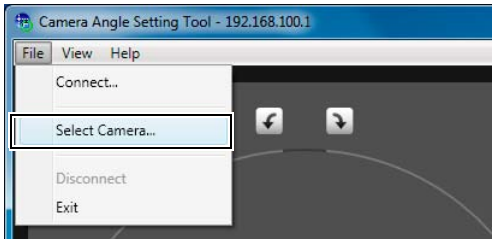
- Access to one camera is restricted to 30 minutes. The Camera Angle Setting Tool will be disconnected automatically after 30 minutes. Reconnect if you do not complete camera angle settings within this time.
- One camera cannot be accessed by the Camera Angle Setting Tool from multiple PCs at the same time.

Connecting with a Camera List

When using multiple cameras, the camera connection information already entered into the camera specification file can be read into the camera list used by the Camera Angle Setting Tool. This way you can easily connect to multiple cameras without having to enter the camera information for each one. See “Creating a Camera Specification File” (P. 3-9) for information on how to create a camera specification file.

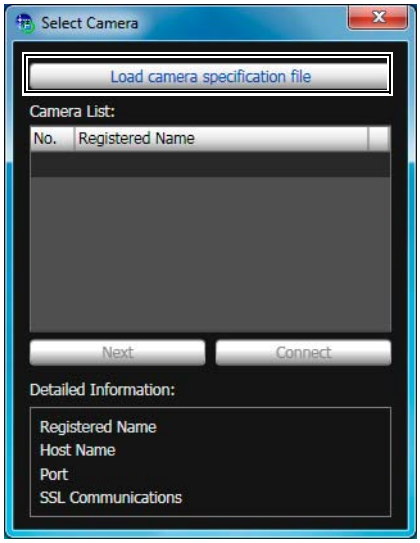
■ Loading a Camera Specification File

1 Click [Select Camera] from the [File] menu.

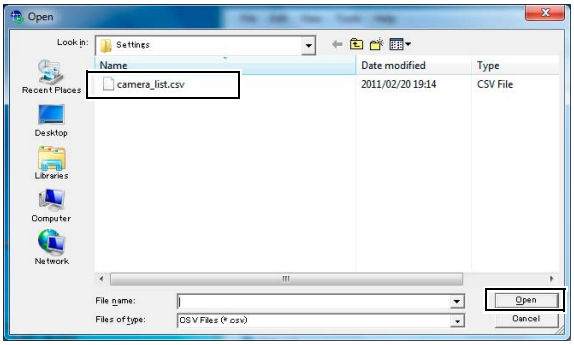


The [Select Camera] dialog box will appear.

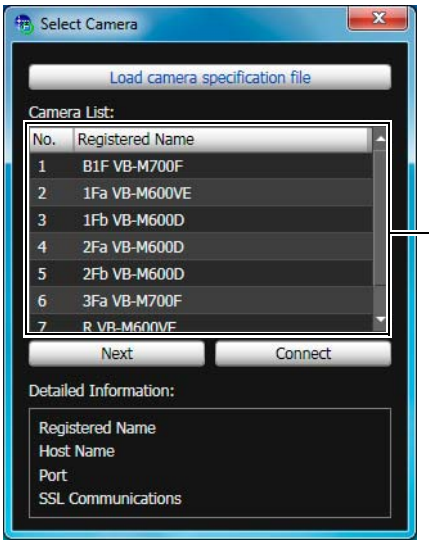
2 Click [Load camera specification file].



3 Select the camera specification file and click [Open].



The camera specification file will be loaded and camera names listed will be displayed under [Camera List].

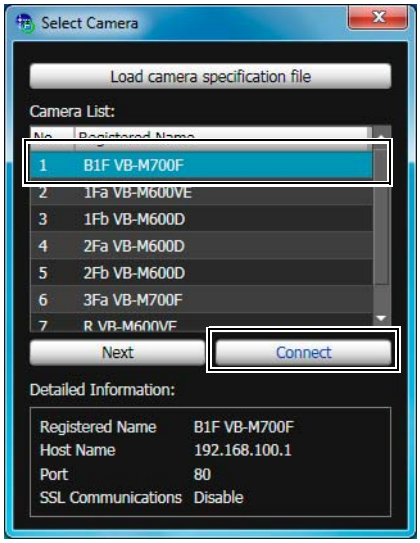


Note

- The [Select Camera] dialog box will remain open unless the Camera Angle Setting Tool is shut down or the X at the top right of the dialog box is clicked.
- The camera list is discarded when the Camera Angle Setting Tool is shut down. Load the camera specification file the next time you launch the Camera Angle Setting Tool.

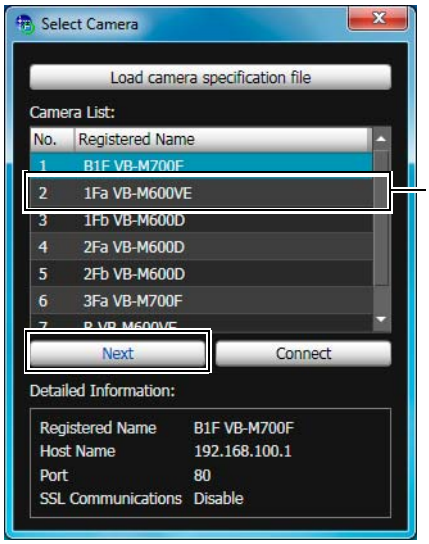
■ Connecting to the Camera

From the camera list, select the camera to connect to and click [Connect].



■ Connecting to the Next Camera on the List

Click [Next] to disconnect the camera currently connected and connect to the next camera on the list.

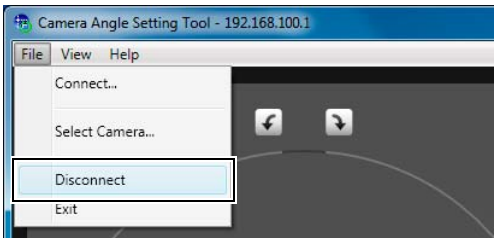


Note

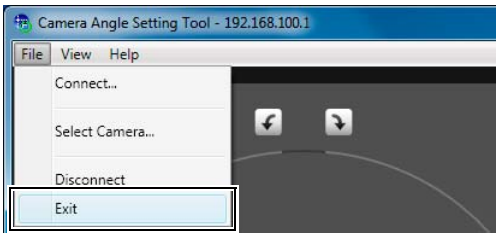
In [Detailed Information], information for the camera selected in the camera list is displayed.

Disconnecting from the Camera, Shutting Down

1 Click [Disconnect] from the [File] menu to disconnect the currently connected camera.



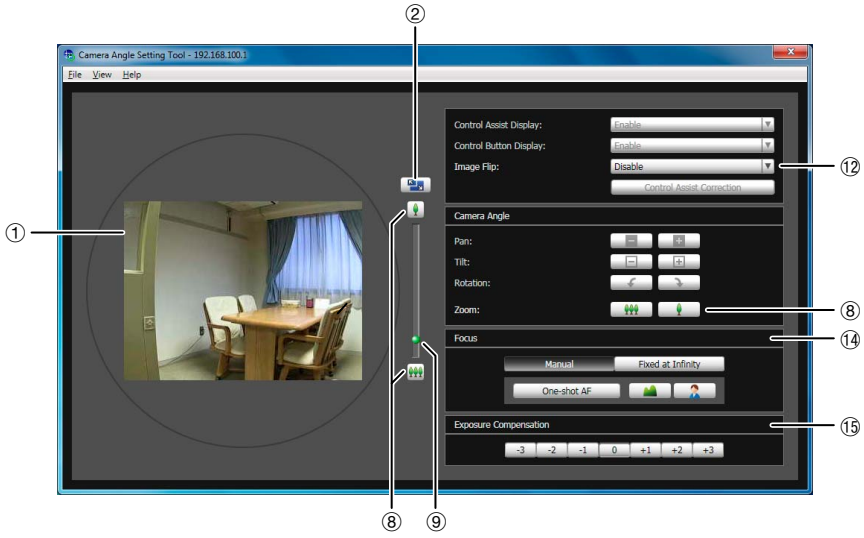
2 Click [Exit] from the [File] menu to shut down the Camera Angle Setting Tool.



Display Screen of Camera Angle Setting Tool

M600

M700



① Image Display Area
The image captured by the camera is shown.

② [Switch Screen Size] button
Switches the display screen size between “320 x 240” and “640 x 480”. The display screen size can also be selected from [Display Screen Size] from the [Display] menu.

③ Control Assist M600
Displays dotted lines showing the range of pan operation and tilt operation. The camera angle cannot be changed to positions with no dotted lines.

④ [Pan] button M600
Control the camera's pan operation.

⑤ [Tilt] button M600
Control the camera's tilt operation.

⑥ [Rotation] button M600
Control the camera's rotation operation.

⑦ [Rotation] slider M600
You can click on the slider or drag the knob to control the camera's rotation operation.

⑧ [Zoom] button
The button to operate the zoom ratio.

⑨ [Zoom] slider
The slider to operate the zoom ratio.

⑩ [Control Assist Display] selection box M600
Select whether to [Enable] or [Disable] operation assist in the image display area.

⑪ [Control Button Display] selection box M600
Select whether to [Enable] or [Disable] the [Pan] button and [Tilt] button in the image display area.

⑫ [Image Flip] selection box
Select the orientation of the camera image.
If [Enable] is selected, the image will be rotated 180 degrees.

⑬ [Control Assist Correction] M600
When the orientation of the camera is moved by hand, the operation assist display will not correspond with the actual camera angle. In this case, click [Control Assist Correction] to confirm the actual camera angle and automatically correct the display position of operation assist.
Operation assist correction takes about 1 minute to complete.

⑭ [Focus]
You can control the focus.

⑮ [Exposure Compensation]
You can control the exposure.

Important

You must set Intelligent Function detection areas and privacy masks again after changing settings in the Camera Angle Setting Tool.

Setting the Camera Angle

M600 You can operate pan, tilt, rotation and zoom operations to set a desired camera angle.

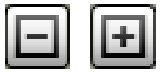
M700 You can operate zoom operation only.

■ Set Using the Operation Buttons and Sliders

M600

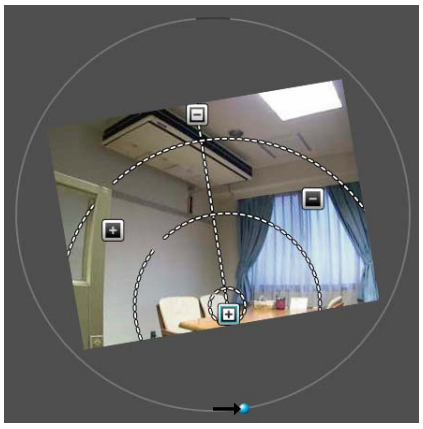
Click each of the [Pan], [Tilt], [Rotation] buttons to set the camera angle. Camera angle changes in orientation if the button is held down, and stops when the button is released.

Pan (horizontal movement) operation

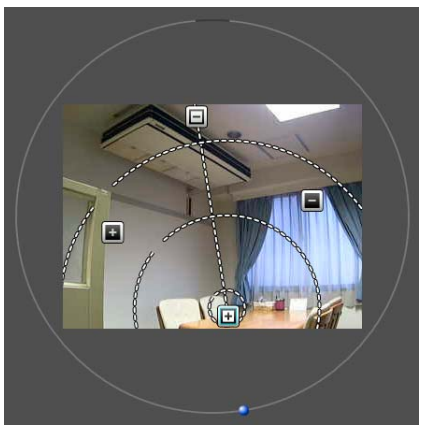

Tilt (vertical movement) operation

Rotation (angled movement) operation

To set rotation using the [Rotation] slider, drag the slider and release the mouse button when the subject in the image is shown at a level angle.



▼



■ Click the Image to Set Camera Angle M600

Click the desired position in the image and the camera angle will move to center that position on the screen. However, if the position clicked is beyond the range of the pan or tilt, the camera angle will move only in the pan or tilt direction that is within the valid range of movement.

Note

If the camera moves in a different way from operation control or cannot be set to the range indicated by operation assist, then operation assist may not correspond to the actual camera angle. Click [Control Assist Correction], then try to set the camera angle again.

■ Changing the Camera Zoom Ratio

The zoom ratio is set by using the [Zoom] buttons or [Zoom] slider.

[Zoom] buttons
Hold down to operate and release to stop.

Zoom in.

Zoom out.

[Zoom] slider
Drag the slider. The camera zoom ratio will change according to the position on the slider.

Setting Focus and Exposure Compensation

■ Setting the Focus

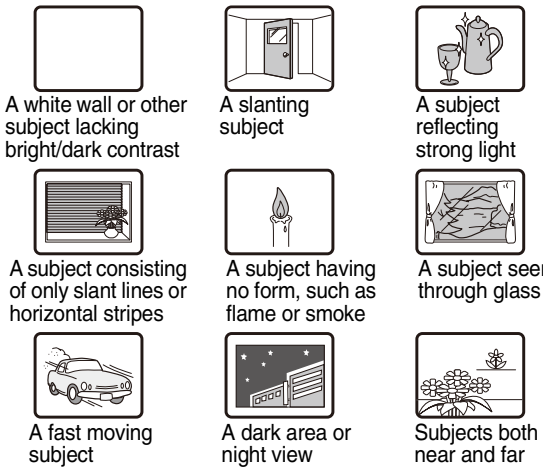
Use manual operations to focus on a desired position or fix at infinity. In manual operations, you can use the one-shot AF function to focus on the subject.

[Manual]:
You can adjust the focus manually by continuously pushing the (far) and (near) buttons.
Clicking [One-shot AF] will use autofocus to focus on a subject and then return to manual focus.
[Fixed at Infinity]:
You can set the focus so that it is fixed near infinity.

Note

- One-shot AF may not focus properly on the following subjects.

Subjects Difficult to Focus On


A white wall or other subject lacking bright/dark contrast
A slanting subject
A subject reflecting strong light
A subject consisting of only slant lines or horizontal stripes
A subject having no form, such as flame or smoke
A subject seen through glass
A fast moving subject
A dark area or night view
Subjects both near and far

- After rebooting the camera, it is recommended that you check whether the camera is focusing correctly.
- Focus ranges (rough guide) are shown in the table below.

Focus Mode	Day/Night Setting	
	Day Mode	Night Mode
	0.3 m (12 in.) - ∞	1.0 m (3.3 ft.) - ∞
Fixed at infinity	Point of infinity*	

* When using an infrared lamp, the camera may be out of focus.

■ Setting the Exposure

You can set seven levels of image brightness (-3 to +3).

To darken the image, select a negative value. To brighten the image, select a positive value.

Note

- If the camera's Exposure Mode (P. 7-15) was set to [Manual], it will be changed to [Auto] after setting exposure compensation.
- The exposure compensation value set with the Camera Angle Setting Tool will be reset when the camera is rebooted. The value will not be reflected in [Exposure Compensation] of [Initial Camera Settings] (P. 5-9) in [Camera] in the Setting Menu.

Creating a Camera Specification File

You can load a camera list in the [Select Camera] dialog box (P. 3-3) if you create a camera specification file which lists connection information for cameras. The camera list allows for simple switching between camera connections for multiple cameras. Create a camera specification file beforehand using a text editor. The file must be saved in CSV file format.

■ Camera Specification File Content

The 1st row in the camera specification file is the header row. Enter a title for each column.
Camera information is listed for one camera per row starting from the 2nd row.
Enter the following information for each column.

Column	Content
Registered Name	The camera name. Displayed in the camera list during connection.
Host Name	The camera's host name or IP address.
Port Number	The camera's HTTP port (factory default setting is 80).
Administrator User Name	The camera's administrator user name (factory default setting is “root”).
Administrator Password	The camera's administrator password (factory default setting is “camera”).
SSL Communications	SSL communications: 1 No SSL communications: 0 (factory default setting is 0).

	Registered Name	Host Name	Port Number	Administrator User Name	Administrator Password	SSL Communications
	↓	↓	↓	↓	↓	↓
1st row Header row →	RegisterName	HostName	PortNumber	UserName	Password	ConnectType
From 2nd row Camera information for 1 camera per line (up to 30 cameras)	B1F VB-M700F	192.168.100.1	80	root	camera1	0
	1Fa VB-M600VE	192.168.100.2	80	root	camera2	0
	1Fb VB-M600D	192.168.100.3	80	root	camera3	0
	⋮	⋮	⋮	⋮	⋮	⋮

Important

Up to 30 cameras can be registered. If camera information for more than 30 cameras is listed, an error will occur when the file is loaded into the Camera Angle Setting Tool.

■ Entering in a Text Editor

Separate each field with a comma. When you save the file, use the .csv file extension.

```
RegisterName,HostName,PortNumber,UserName,Password,ConnectType
B1F VB-M700F,192.168.100.1,80,root,camera1,0
1Fa VB-M600VE,192.168.100.2,80,root,camera2,0
1Fb VB-M600D,192.168.100.3,80,root,camera3,0
2Fa VB-M600D,192.168.100.4,80,root,camera4,0
2Fb VB-M600D,192.168.100.5,80,root,camera5,0
3Fa VB-M700F,192.168.100.6,80,root,camera6,0
R VB-M600VE,192.168.100.7,443,root,camera7,0
```

Important

- Enter the actual administrator passwords in the camera specification file. Handle the camera specification file with sufficient care.
- If the camera specification file includes delimiters other than commas, such as semicolons or blank rows, the process of loading the camera specification cannot be performed.

Chapter 4

Top Page of the Camera

❑ Accessing the Setting Page, Admin Tools and Viewer
❑ Certificate Registration

Accessing the Top Page of the Camera

Accessing the Top Page of the Camera

From the top page of the camera, you can navigate to the Setting Menu to configure various camera settings, launch Admin Tools, and display the viewer to view images.

1 Launch the web browser.

2 Enter the IP address you specified in the Initial Setting Tool.

Important

This “Operation Guide” explains relevant operations using the IP address 192.168.100.1 (factory default setting). You need to enter the actual IP address set for the camera when following instructions.

The top page of the camera appears.

① Language Button
Click to switch the display language.
The top page language switches to the selected language.

② Setting Page (Setting Menu) Link
Click to make detailed settings. See “Chapter 5 Setting Page”.

③ Admin Tools Link
Click to use the Admin Tools. See “Chapter 6 Admin Tools”.

④ Admin Viewer Link
Click to access the Admin Viewer. See “Chapter 7 Admin Viewer/VB Viewer”.

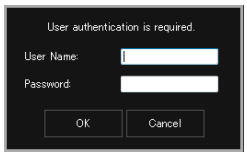
⑤ VB Viewer Link
Click to access the VB Viewer. See “Chapter 7 Admin Viewer/VB Viewer”.

User Authentication

User authentication is required to access [Setting Page], [Admin Tools] and [Admin Viewer].

Windows Security
The server 192.168.100.1 at Administrator requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name
Password
Remember my credentials
OK
Cancel

Setting Page authentication window



Admin Tools/Admin Viewer authentication window

The factory default setting user name and password are:
User name: root Password: camera
(The user name “root” is the administrator account for the camera.)

Important

- To ensure system security, be sure to change the administrator password. Do not forget the new password.
- If the Administrator and an authorized user share the VB Viewer on the same PC, it is strongly recommended that the [Remember my credentials] checkbox be cleared.
- If the wrong user name or password is entered, you cannot connect to the camera. Connect to the camera by entering the correct user name and password.
- Press the reset switch to restore factory default settings if you have forgotten the administrator password (P. 8-18). Note, however, that this will reset all camera settings to factory default settings except for time and date.
- The Admin Tools and the Admin Viewer cannot be used if an IPv6 address is specified. Only host names are supported for IPv6 connections.

Certificate Registration

In order to use [Admin Tools] and [Admin Viewer], you must first install the two certificates issued by Canon Inc. on your PC. The certificates are stored on the Setup CD-ROM. Follow the procedure below to register the certificates using Internet Explorer.

1 Double-click admintools1 found in the [Certificate] folder in the [Applications] folder on the bundled Setup CD-ROM.

2 Click [Install Certificate].

3 Click [Next] in the [Certificate Import Wizard].

4 Follow the procedure below to import the certificate on the [Certificate Store] screen.

(1) Select [Place all certificates in the following store].

(2) Click [Browse], select [Intermediate Certification Authorities], and click [OK].

(3) Click [Next].

5 Click [Finish] to close the Certificate Import Wizard.

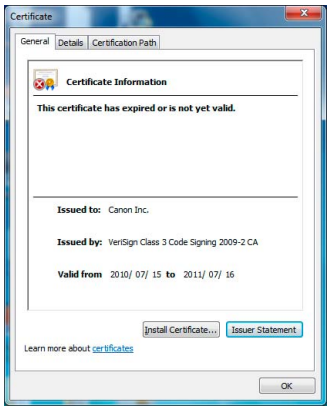
When certificate registration is complete, a message, “The import was successful”, will appear.

6 Double-click admintools2 found in the [Certificate] folder in the [Applications] folder.

The [Certificate] dialog box will appear.

Note

PCs configured after July 17, 2011 will display the following window. You can continue certificate registration without issue.



7 Click [Install Certificate].

8 Click [Next] in the [Certificate Import Wizard].

9 Follow the procedure below to import the certificate on the [Certificate Store] screen.

(1) Select [Place all certificates in the following store].

(2) Click [Browse], select [Trusted Publishers], and click [OK].

(3) Click [Next].

10 Click [Finish] to close the Certificate Import Wizard.

When certificate registration is complete, a message, “The import was successful”, will appear.

Chapter 5

Setting Page

- ❏ Administrator Password and Network Detailed Settings
- ❏ Camera Date and Time Settings
- ❏ Camera Name and Initial Camera Settings Related Settings
- ❏ Image Size and Quality Settings
- ❏ Upload and E-mail Notification Settings
- ❏ Image Server, Audio Server and HTTP Server Settings
- ❏ Settings Related to Events
- ❏ User Registration/Authorities and Access Restriction Settings
- ❏ IPsec Settings
- ❏ HTTP Communication Encryption (SSL/TLS) Settings
- ❏ SD Memory Card Operations and Displaying Information
- ❏ Settings for Items Requiring Rebooting
- ❏ Maintenance (Displaying Log and Setting Information/Rebooting/Factory Default Settings)

Setting Menu

From the Setting Menu, you can navigate to each setting page to set various items regarding the camera.
Information describing what can be set from each setting page is listed as follows. See each setting page for details.

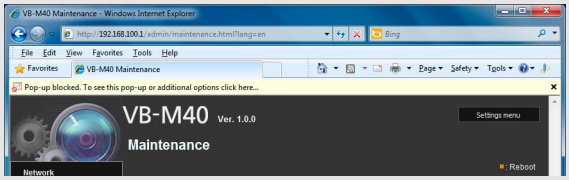
Setting Menu

- Network
  Administrator password, LAN, IPv4, IPv6, DNS and SNMP Settings (P. 5-5)
- Date and Time
  Camera date and time and time zone settings (P. 5-8)
- Camera
  Camera name, initial camera settings, day/night, external input device name and external output device name settings (P. 5-9)
  M700
  Installation Conditions (P. 5-9)
  M40
  Camera control, installation conditions, camera position control
- Video
  Initial camera settings, image quality, image size, and frame rate settings for JPEG and H.264, as well as on-screen display settings (P. 5-13)
- Upload
  HTTP and FTP upload settings and e-mail notification settings (P. 5-15)
- Server
  Image server, audio server and HTTP server settings (P. 5-18)
- Event
  Image buffer, volume detection, external device input, timer, and sound clip upload (P. 5-20)
- Access Control
  Authorized user account, user authorities, host access restriction settings (P. 5-23)
- IPsec
  IPsec settings (P. 5-25)
- SSL/TLS
  Certificate creation, administrative settings and encrypted communication settings (P. 5-28)
- Memory Card
  SD memory card operations and information display (P. 5-30)
- Reboot Item
  Setting items that require the camera to be rebooted (Reboot Item) (P. 5-32)
- Maintenance
  Display and execution (displaying logs, current settings, rebooting and restoring initial settings) (P. 5-33)

Important

Notes on Use with Windows 7/Vista/XP

- When the [Windows Security Alert] dialog box appears, click [Allow Access].
  Once set, this warning dialog will no longer appear.
- If the pop-up is blocked and an information bar appears when attempting to access [View Logs] or [View Current Settings] on the maintenance page, enable Pop-up by following the procedure explained in the information bar.



Accessing the Setting Menu

The various settings of the camera are configured by accessing the camera in the web browser. First, access the top page of the camera (P. 4-2).
For details on entering the user name and password, see P. 4-2.

Setting Menu

You can access each setting page and Admin Viewer from the Setting Menu.

① [Admin Viewer]
Clicking this button opens Admin Viewer.

② [Back to top]
Clicking this button navigates to the top page.

③ Setting Menu
Clicking this button navigates to each setting page.

Important

To ensure security, exit the web browser after completing settings from the Setting page.

Items Common to All Setting Pages

■ Applying New Settings

When a setting is changed on any setting page, [Apply] shown on the top right and bottom right of the setting page turns from grayed-out to blue.

Click [Apply] to make the new setting effective.
Click [Clear] to restore the previous setting.

■ Setting Changes Requiring Rebooting

Items that require the camera to be rebooted in order to change settings are flagged with an orange mark.

When any item accompanied by an orange mark is changed, the [Apply] shown at the top right and bottom right of each setting page changes to [Apply and reboot].

Click [Apply and reboot] to confirm the new setting. The new setting will be reflected and the camera will be rebooted.
Click [Clear] to restore the previous setting.

Important

Setting changes will be lost if you navigate to another setting page without clicking [Apply] or [Apply and reboot]. Be sure to click [Apply] or [Apply and reboot] to make the new settings effective.

■ Returning to the Setting Menu

Click [Settings menu] at the top right of each setting page to return to the Setting Menu.

Important

- Do not open multiple setting pages at one time and try to change the settings of a single camera.
- Do not use the [Back] or [Forward] buttons in the web browser to navigate between setting pages. The changed settings may return to the original settings or unwanted setting changes may be applied.

Note

Click on [Help] at the beginning of any item to display a detailed explanation of that setting item.

[Network]
Setting Administrator Password, LAN, IP Address, DNS, etc

The following can be set here.

- Administrator Password
  Set the administrator password.
- LAN
  Set the IP address and other items needed to establish a LAN connection.
- IPv4
  Set IPv4 address.
- IPv6
  Set IPv6 address.
- DNS
  Set the name server address, host name and DDNS registration.
- SNMP
  Configure the necessary settings to use SNMP.

Administrator Password

① [Password]
Set the administrator password. Up to eight (single-byte) ASCII characters (space or printable characters) can be used. The factory default setting is “camera”. If the Admin Viewer, Admin Tools, etc., are connected, terminate the connection before changing the password.

② [Confirm Password]
Enter the same password as above for confirmation.

Important

- To ensure system security, be sure to change the administrator password. Do not forget the new password.
- Press the reset switch to restore factory default settings if you have forgotten the administrator password (P. 8-18). **Note, however, that this will reset all camera settings to factory default settings except for date and time.**

LAN

① [LAN Interface]
Select [Auto], [Full Duplex] or [Half Duplex]. Normally [Auto] is used.

② [Maximum Packet Size]
Enter the maximum transmission unit. Normally there is no need to change the default setting of 1500.

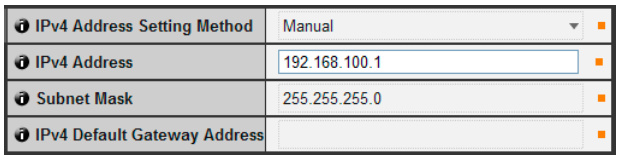
Important

- The camera may become inaccessible from the active web browser if [LAN Interface] or [Maximum Packet Size] settings are changed. Check beforehand the precautions in “Important” in “[Reboot Item] Setting Items Requiring Rebooting” (P. 5-32).
- Set [Maximum Packet Size] to 1280 or greater if using IPv6.

Note

- When using optical fiber or ADSL, setting the maximum packet size to a slightly lower value may increase sending efficiency.

IPv4



① [IPv4 Address Setting Method]
Select [Manual] or [Auto (DHCP)] in the address setting method. If [Manual] is selected, directly enter the values according to the environment in which the camera is used. If [Auto (DHCP)] is selected, the value automatically acquired from the DHCP server will be entered in [IPv4 Address], [Subnet Mask] and [IPv4 Default Gateway Address].

② [IPv4 Address]
If [Manual] is specified in ①, enter a fixed IP address.

③ [Subnet Mask]
If [Manual] is specified in ①, enter the designated subnet mask values for each network.

④ [IPv4 Default Gateway Address]
Enter an appropriate value if [Manual] is specified in ①. Be sure to set when connecting the camera to a different subnet from that of the viewer.

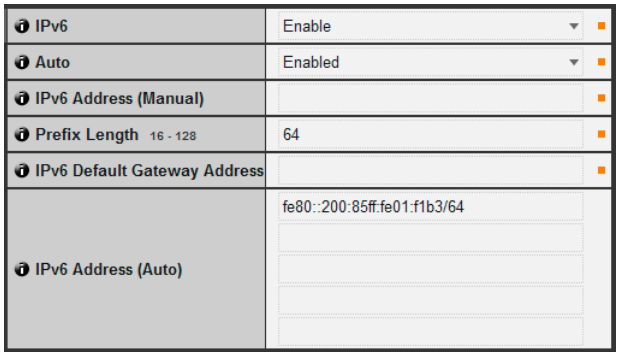
Important

- Contact your System Administrator for the [IPv4 Address], [Subnet Mask] and [IPv4 Default Gateway Address].
- The camera's IP address cannot be set to an IP address that starts with 127., such as 127.0.0.1.
- If any of the [IPv4 Address], [Subnet Mask] or [IPv4 Default Gateway Address] settings is wrong, network access may be disabled. In this case, see "Performing Initial Settings for the Camera" (P. 2-5) and use VB Initial Setting Tool to set the address again.
- The camera may become inaccessible from the active web browser if settings are changed in [IPv4 Address], [Subnet Mask] or [IPv4 Default Gateway Address]. Check beforehand the precautions in "Important" in "[Reboot Item] Setting Items Requiring Rebooting" (P. 5-32).
- If [Auto (DHCP)] is selected as the IPv4 address setting mode, the IPv4 address may not be assigned correctly in certain environments, such as when a router is present between the DHCP server and the camera. In this case, assign a fixed IPv4 address from the [Manual] settings.

Note

- You can check the IPv4 address assigned by [Auto (DHCP)] with the VB Initial Setting Tool.

IPv6



① [IPv6]
Set IPv6 use to [Disable] or [Enable].

② [Auto]
Select [Enabled] to set the address automatically or [Disabled] not to set the address automatically.

③ [IPv6 Address (Manual)]
Enter a fixed IPv6 address.

④ [Prefix Length]
Enter a prefix length from 16 to 128 if [Disabled] is specified in ②.

⑤ [IPv6 Default Gateway Address]
Enter a default gateway address if [Disabled] is specified in ②. Be sure to set when connecting the camera to a different subnet from that of the viewer.

⑥ [IPv6 Address (Auto)]
If [Enable] is specified in ① and [Enabled] is specified in ②, then the automatically acquired address will be shown.

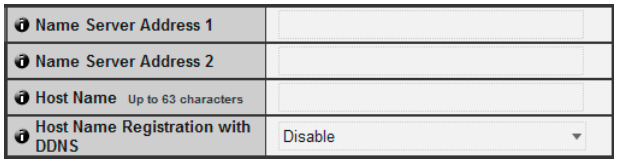
Important

- Contact your System Administrator for the [IPv6 Address (Manual)], [Prefix Length] and [IPv6 Default Gateway Address].
- The camera may become inaccessible from the active web browser if settings are changed in [IPv6], [IPv6 Address (Manual)], [Prefix Length] or [IPv6 Default Gateway Address]. Check beforehand the precautions in "Important" in "[Reboot Item] Setting Items Requiring Rebooting" (P. 5-32).

Note

- In an environment where IPv6 cannot be used, if IPv6 is set to [Enable] and auto is set to [Enabled], then the [IPv6 Address (Auto)] field will display the link-local address only.

DNS



① [Name Server Address 1], [Name Server Address 2]
Enter the name server address you want to register. To register only one address, keep the [Name Server Address 2] field blank.

② [Host Name Registration with DDNS]
Select [Enable] and enter the name server address and host name of the camera. You can register the host name of the camera in the name server.
Characters A to Z, a to z, 0 to 9, "-" (hyphen), "_" (underscore) and "." (period) may be used up to 63 (single-byte) characters in length.

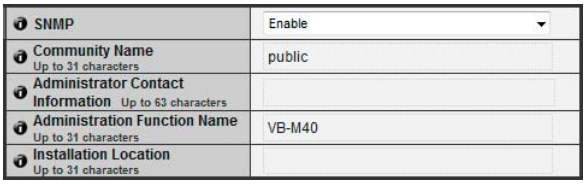
Important

Do not use "_" (underscore) in [Host Name] in Internet Explorer 8.

Note

- Register the host name for DNS if the camera IP Address Setting Method is [Auto (DHCP)] (P. 5-5). DNS server registration settings must be set in advance. Contact your System Administrator for the DNS server settings.
- If the name server address 1 is unavailable, the name server address 2 will be accessed. However, the name server address 2 must be set in advance.

SNMP



① [SNMP]
Set SNMP use to [Disable] or [Enable]. Camera information can be referenced by the SNMP Manager if [Enable] is specified.

② [Community Name]
Set a community name for SNMP. It is recommended that you change the community name to ensure system security.

③ [Administrator Contact Information]
Set contact information (e-mail address, etc.) for the Administrator of the camera. Setting information can be referenced by the SNMP manager.

④ [Administration Function Name]
Set the camera name used for administration. Setting information can be referenced by the SNMP manager. If left blank, the following will be used by default:
M700 VB-M700
M600 VB-M600
M40 VB-M40

⑤ [Installation Location]
Set information regarding the installation location of this camera. Setting information can be referenced by the SNMP manager.

Note

- The information set in the camera is read-only from the SNMP manager.
- Use the SNMP Manager that supports SNMP MIB2 (supporting RFC1213).
- Supports SNMP protocol versions v1 and v2c (v3 unsupported).

[Date and Time] Setting Date and Time

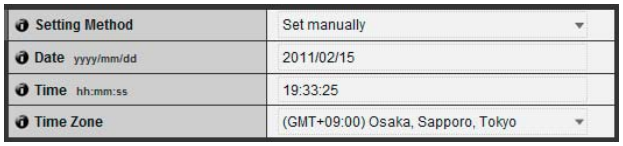
The following can be set here.

- Current Date and Time
  The date and time set in the camera is shown.
- Setting
  Select the date and time setting method and time zone for the camera.

Current Date and Time

[Date], [Time]
The date and time currently set in the camera are shown.

Setting

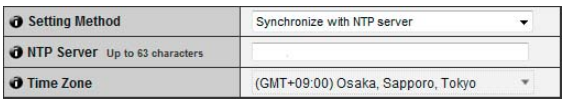


① [Setting Method]
Select from [Set manually], [Synchronize with NTP server], [Synchronize with NTP broadcast], [Synchronize with computer time].

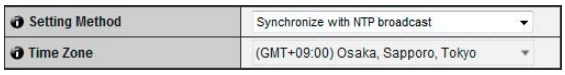
② [Date], [Time]
Set the following according to the selection made in [Setting Method].

[Set manually]
Set the desired date and time. The date is set by <year/month/day>, and the time in 24-hour format in the order <hour:minute:second> (two digits for month, day and time).
Example: To specify 1:23:04 pm, 23 August 2011, enter “2011/08/23” and “13:23:04”.

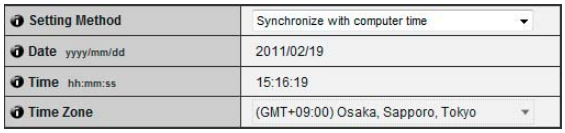
[Synchronize with NTP server]
The camera will synchronize with the NTP server time. Enter the IP address or host name of the NTP server.



[Synchronize with NTP broadcast]
The camera will synchronize with the NTP server time. The camera will synchronize time with NTP broadcasts received from the NTP server.



[Synchronize with computer time]
The camera will synchronize with the date and time of the computer currently accessing the camera. The time zone will also be selected automatically.



③ [Time Zone]
Select from the list the appropriate time difference from the Greenwich Mean Time.

Note

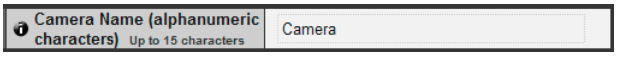
- If [Synchronize with computer time] is selected, after clicking [Apply], [Setting Method] will change to [Set manually].
- If [Synchronize with NTP server] is selected and the IP address of the NTP server is incorrect or a connection with the NTP server cannot otherwise be established, the date and time will not be changed.
- The camera's NTP broadcast mode does not support IPv6.
- If the [Time Zone] setting is changed, the date and time display will update automatically according to the specified time zone.

[Camera] Setting Initial Camera Settings and External Device Name

The following can be set here.

- Camera Name
  Enter the name of the camera. The camera name is required for use with RM-Lite.
- Initial Camera Settings
  Sets shooting settings at camera start up.
- Camera Control M40
  Set the digital zoom and image stabilizer.
- Day/Night
  Set the day/night switching mode.
- Installation Conditions M700 M40
  Sets installation conditions, such as LED settings.
- Camera Position Control M40
  Set whether or not to limit the pan, tilt and zoom operations to the preset positions. Also, set the camera position when nobody has control privileges.
- External Device Name
  Set the external input device name and external output device name.

Camera Name



[Camera Name]

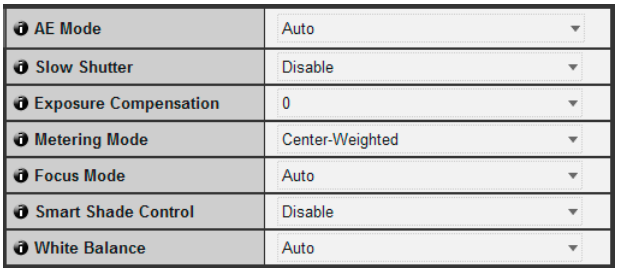
Be sure to enter [Camera Name (alphanumeric characters)].

Up to 15 ASCII characters (spaces and printable characters) may be used for [Camera Name (alphanumeric characters)].

Note

- The camera name set here will be shown when the camera is registered for use with bundled RM-Lite.

Initial Camera Settings



① [AE Mode], [Slow Shutter], [Shutter Speed]

Set the exposure control and shutter speed for the camera startup.

[AE Mode]

[Auto]

The exposure is controlled automatically.

[Auto (Flickerless)]

In this mode, image flickers caused by fluorescent lights, etc., can be reduced. The shutter speed is automatically adjusted according to the brightness of the environment in which the camera is used.

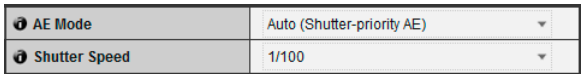
[Auto (Shutter-priority AE)]

In this mode, a desired shutter speed can be specified.

[Slow Shutter]

Slow shutter can be used only if [Auto] is selected in [AE Mode].

Set the maximum slow shutter time to be used when in auto exposure mode when capturing video in a dark place. Select [Disable], [1/15] or [1/8]. As longer shutter times generate residual images when capturing a moving subject, select an appropriate time according to the capture conditions.



[Shutter Speed]

Shutter speed can be used only if [Auto (Shutter-priority AE)] is selected in [AE Mode].

Select a desired shutter speed from the 12 levels from [1/8] to [1/8000]. When capturing a moving subject, selecting a higher shutter speed can reduce blurry image capture.

② [Exposure Compensation]

The exposure compensation when the camera starts can be set in the range of -3 to 3. To brighten the image, set a positive value. To darken the image, set a negative value.

③ [Metering Mode]

Set the metering mode when the camera starts.

[Center-Weighted]

The entire screen is metered by focusing on the center of the screen.

Even when slightly darker/brighter areas are present on the periphery of the screen, an appropriate exposure can be achieved for the subject near the center.

Use this mode if the subject is positioned near the center of the screen.

[Average]

The entire screen is metered by averaging.

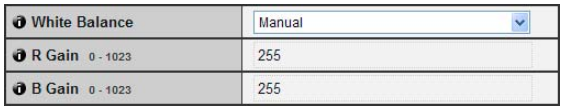
A stable exposure can be achieved even in a capture environment where there are notable brightness differences within the screen.

Use this mode to stabilize the exposure in locations where vehicles or people are moving.
[Spot]
The center of the screen is metered.
An appropriate exposure can be achieved for the subject at the center of the screen regardless of the brightness/darkness on the periphery of the screen.
Use this mode if you want to adjust the exposure to the center of the screen because the subject is receiving a spotlight or backlight, etc.

④ [Focus Mode] M40
Set the focus mode when camera starts.
[Auto]
Automatically brings the subject into focus. Normally [Auto] is selected.
[Fixed at infinity]
The focus can be fixed to near infinity.

⑤ [Smart Shade Control]
Select [Disable] or one of the 7 levels from 1 (weak) to 7 (strong) for smart shade control at the camera startup.

⑥ [White Balance]
Select the white balance according to the light source to achieve natural color in the image.
[Auto]
The white balance is adjusted automatically.
[Manual]
Set the values of red and blue gain according to the light source. Enter a value from 0 to 1023 for both the [R Gain] and [B Gain].



[Daylight Fluorescent]
Select this option to capture video under daylight fluorescent lighting.
[White Fluorescent]
Select this option to capture video under daylight fluorescent or white fluorescent lighting.
[Warm Fluorescent]
Select this option to capture video under warm fluorescent lighting.
[Mercury Lamp]
Select this option to capture video under mercury lamps.
[Sodium Lamp]
Select this option to capture video under orange sodium lamps.
[Halogen Lamp]
Select this option to capture video under halogen bulbs or incandescent bulbs.

Important

- The initial camera settings ① to ⑥ define the defaults that apply when the camera is started. Setting changes will be reflected only after the camera is reconnected or rebooted. Specify the settings used in the actual operating environment from the Admin Viewer (P. 7-12).
- If the subject is a traffic signal or electronic scoreboard, etc., the captured image may flicker.
  In this case, try changing the [AE mode] setting to [Auto (Shutter-priority AE)] and selecting a shutter speed lower than 1/100 to see if the problem improves.
- M40
  In conditions where an outdoor scene is captured from an indoor location through a glass window, the camera may focus on the glass surface if there is dust or water there. Install the camera at the shortest possible distance (within 30 cm) from the glass surface.

Note M40

- See “Subjects Difficult to Focus On” (P. 3-8).
- Focus ranges (rough guide) are shown in the following table according to the settings of [Day/Night] (P. 5-11), etc.

Focus Mode	Dome Setting	Day/Night Setting			
		Day Mode		Night Mode	
		Wide end	Tele end	Wide end	Tele end
Auto	Do not use	0.3 m (12 in) - ∞	1.0 m (3.3 ft) - ∞	1.0 m (3.3 ft) - ∞	1.5 m (4.9 ft) - ∞
	Use	2.0 m (6.6 ft) - ∞		1.0 m (3.3 ft) - ∞	2.2 m (7.2 ft) - ∞
Fixed at infinity	Do not use/Use	Point of infinity*			

* When using an infrared lamp, the camera may be out of focus.

Camera Control M40

① [Digital Zoom]
Set digital zoom to [Enable] or [Disable].
* The higher the digital zoom ratio, the lower the image quality becomes.

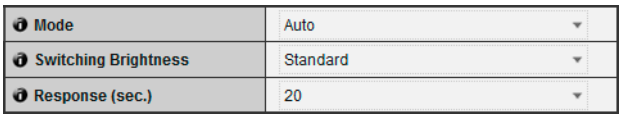
② [Image Stabilizer]
Select [Disable], [On1] or [On2] for image stabilizer. Image stabilizer has the effect of correcting blurry images. Try [On2] if the image is still blurry after selecting [On1].
If you have selected [On1] or [On2] as the image stabilizer setting, the viewing angle will be smaller and the image more coarse than when [Disable] is selected. This is not a malfunction.

	Degree of blurriness corrected	Viewing angle ratio	Effective pixels
Disable	—	100%	Approx. 1.23 megapixels
On1	Small	83%	Approx. 0.85 megapixels
On2	Large	50%	Approx. 0.31 megapixels

Important

- If [On2] is selected, it is best to select an image size smaller than “640 x 480”.
- The image stabilizer is not effective when the subject is shaking.
- The image stabilizer is not effective beyond a certain level of vibration or against momentary vibration.
- See “Important” on P. 6-15, P. 6-20 for precautionary notes regarding Admin Tools configuration when image stabilizer is set.
- See “Important” on P. 7-11 for precautionary notes regarding the Viewer when image stabilizer is set.

Day/Night



① [Mode]
Set Day/Night mode to [Manual] or [Auto].
If [Manual] is selected, it is possible to switch manually between [Day Mode] and [Night Mode] using Admin Viewer Night Mode function (P. 7-17).
If you have selected [Auto], set [Switching Brightness] and [Response (sec.)] according to the environment in which the camera is installed as well as the desired switching conditions.

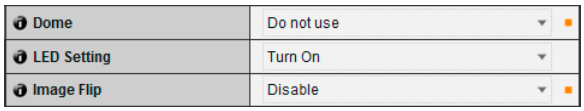
② [Switching Brightness]
Set the brightness at which [Day Mode] and [Night Mode] will be switched. Select [Darker], [Slightly Darker], [Standard], [Slightly Brighter] or [Brighter].
Select [Darker] if you want to capture video in color as much as possible.
Select [Brighter] to reduce noise. Note that this mode switches to black & white sooner.

③ [Response (sec.)]
Set the time in seconds needed for judgment on switching between [Day Mode] and [Night Mode].
Select [5], [10], [20], [30] or [60].
The mode will switch between [Day Mode] and [Night Mode] if brightness remains above or below the level set in ② for the number of seconds specified.
Select [30] or [60] if brightness changes frequently, such as when a light source passes in front of the camera. Select [5] or [10] if change in brightness is minimal.

Important

- If [Auto] is selected for [Day/Night], conduct a thorough operation test to check the effectiveness of the setting beforehand.
- If [Auto] is selected for [Day/Night], set [AE Mode] to [Auto], [Auto (Flickerless)] or [Auto (Shutter-priority AE)]. In addition, set the exposure mode for Admin Viewer (P. 7-15) similarly.
- To use with infrared illumination, set [Day/Night] to [Manual]. Infrared illumination cannot be used with [Auto].
- When [Day Mode] and [Night Mode] are switched, the image may not focus correctly depending on the brightness.
- If [Day/Night] is set to [Auto], the infrared cutoff filter may move several times while the mode is switching between [Day Mode] and [Night Mode]. Pan, tilt, zoom (VB-M40 only) and manual focus will not work during this period.

Installation Conditions M700 M40



① [Dome] M40
Select whether or not a dome is used. To use the camera with a dome housing unit, select [Use].

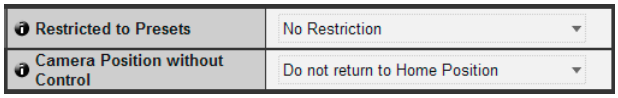
② [LED Setting]
Select [Turn Off] or [Turn On] for the LED operation status on the camera. Set to [Turn Off] if you do not want to turn on the LED.
M40
Set to [Turn Off] if the optional indoor dome housing (DR40-C-VB/DR40-S-VB) will be used, if reflected LED light enters the capture area or otherwise interferes with image capture, or if you do not want to show that the camera is operating.

③ [Image Flip] M40
Select the orientation of the camera image. The factory default setting is [Disable] (ceiling mounted). Select [Enable] when installing in upright positions.

Note M700 M40

The LED will light for several seconds when booting even if the [LED Setting] is set to [Turn Off].

Camera Position Control M40



① [Restricted to Presets]
Set the camera control preset to [No Restriction] or [Preset Only]. The administrator can limit camera control by non-administrators to preset angles by selecting [Preset Only].

② [Camera Position without Control]
Select either [Do not return to Home Position] or [Return to Home Position] as the action when no control privileges are requested by users and the home position has already been set.
When [Return to Home Position] is selected and no users have control privileges, the camera moves automatically to the home position. This function requires the home position of the camera be set in advance. Set the home position using Preset Setting Tool (P. 6-16).

External Input Device 1, 2 / External Output Device 1, 2

[Device Name] for external input device/external output device
Be sure to enter each device name in order to identify the corresponding external device being connected. Enter [Device Name (alphanumeric characters)] using up to 15 characters (ASCII characters (space or printable characters) excluding the double quotation mark (")).

Note

The external device name set here will be shown when the Admin Viewer or bundled RM-Lite is used.

[Video] Setting Image Size, Quality and Frame Rate

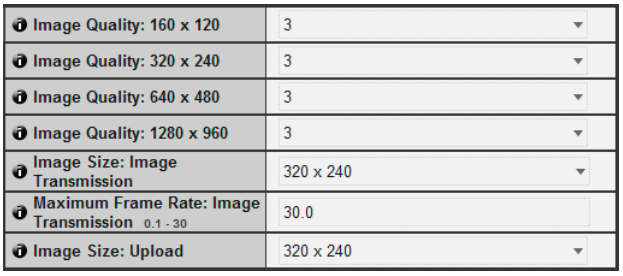
The following can be set here.

- Initial Camera Settings
  Set to add intelligent function information (except volume detection) to JPEG headers.
- JPEG
  Set the image quality, size, maximum frame rate and upload size in JPEG.
- H.264
  Set the bit rate, video size and capture frame rate in H.264.
- On-screen display
  Set time, character string, etc. displayed over images.

Initial Camera Settings

① [Intelligent Function Information]
Select from [Add] or [Do not add] for intelligent function information other than volume detection in JPEG header information.

JPEG



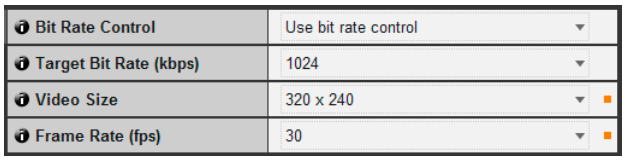
① [Image Quality]
Select a desired image quality from 1 to 5 (5 levels) for images transmitted at each image size in JPEG. Greater values have higher quality.

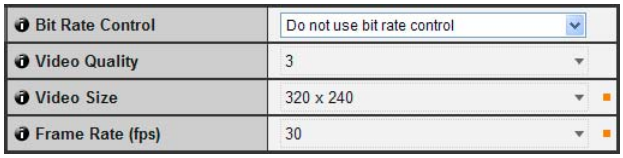
② [Image Size: Image Transmission]
Select [160 x 120], [320 x 240], [640 x 480] or [1280 x 960] for the size of images transmitted. This becomes the start-up image size used by each viewer.

③ [Maximum Frame Rate: Image Transmission]
Limit the maximum transmission frame rate per second to reduce the viewer load. The maximum is 30 frames/sec. Enter a value of between 0.1 and 30.0.

④ [Image Size: Upload]
Select [160 x 120], [320 x 240], [640 x 480] or [1280 x 960] for the size of images uploaded. For details of upload settings, see P. 5-15.

H.264





① [Bit Rate Control]
Select [Use bit rate control] or [Do not use bit rate control].

② [Target Bit Rate (kbps)]
If [Use bit rate control] is selected in ①, select 32 to 4096 (total 12 levels) for the target bit rate.

③ [Video Quality]
If [Do not use bit rate control] is selected in ①, select a desired quality from 1 to 5 (total 5 levels) for H.264 video transmission.
Greater values have higher quality.

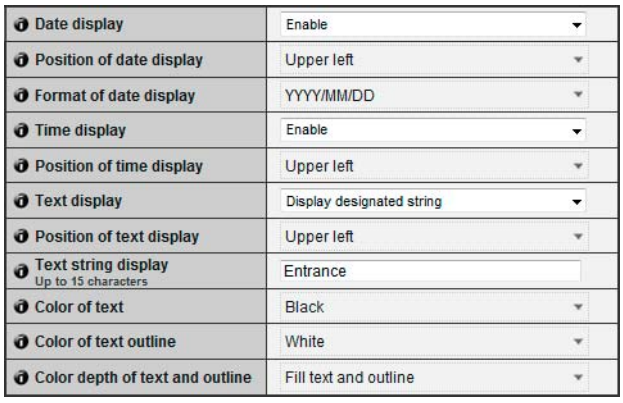
④ [Video Size]
Select [320 x 240], [640 x 480] or [1280 x 960] for the size of video transmitted.

⑤ [Frame Rate (fps)]
Select [10], [15] or [30] (fps) for the frame rate of video transmitted.

Important

- Network load will increase if a larger video size is set or higher video quality and target bit rate are set, as this increases data size per frame.
  JPEG: The frame rate may drop
  H.264: Video may be temporarily disrupted
- Block noise may become noticeable if a large image size and low target bit rate are set.
- The data size may increase depending on the type or movement of the subject. If the frame rate remains low or other undesirable conditions continue for a prolonged period, lower the image size or quality setting.
- Note that if you are using bundled RM-Lite, the hard disk usage will also be affected during recording.

On-screen display



① [Date display]
Select whether to enable date display over images. If [Enable] is selected, date information will be displayed over images.

② [Position of date display]
Select [Upper left], [Upper right], [Lower left] or [Lower right] for the position of date display information.

③ [Format of date display]
Select [YYYY/MM/DD], [DD/MM/YYYY] or [MM/DD/YYYY] for the format of the date display.

④ [Time display]
Select whether to enable time display over images. If [Enable] is selected, display time information will be displayed over images.

⑤ [Position of time display]
Select [Upper left], [Upper right], [Lower left] or [Lower right] for the position of time display information.

⑥ [Text display]
Select [Display nothing], [Display designated string] or [Display camera name] for the text string to display over images.
If [Display designated string] is selected, the [Text string display] set in ⑧ will be displayed.
If [Display camera name] is selected, the text string set in [Camera Name (alphanumeric characters)] under [Camera] will be shown (P. 5-9).

⑦ [Position of text display]
Select the position of text display from [Upper left], [Upper right], [Lower left] or [Lower right].

⑧ [Text string display]
If [Display designated string] is selected in ⑥ [Text display], set a text string up to 15 alphanumeric characters to be displayed over images.

⑨ [Color of text]
Select [Black], [Blue], [Cyan], [Green], [Yellow], [Red], [Magenta] or [White] for the color of text to be displayed over the image.

⑩ [Color of text outline]
Select [Black], [Blue], [Cyan], [Green], [Yellow], [Red], [Magenta] or [White] for the color of text outline.

⑪ [Color depth of text and outline]
Select [Fill text and outline], [Make text only transparent], [Make text only translucent] or [Make text and outline translucent] for the color depth of text and outline to be displayed over the image.

Important

The on-screen time display is not suitable for usage where high reliability is required. Use as reference information only where utmost and constant reliability is required for surveillance.

Note

- The on-screen time display may not correspond with camera time by several seconds (P. 5-8).
- Depending on image quality settings, on-screen display may become difficult to decipher. Set after confirming appearance on actual images.
- On-screen display is subject to intelligent function detections (P. 6-22). Adjust as necessary.

[Upload]
Setting HTTP/FTP Upload and E-mail Notification

The following can be set here.

- General Upload
  Set the upload operation to be performed.
- HTTP Upload
  Set HTTP connection uploads.
- FTP Upload
  Set FTP connection uploads.
- E-mail Notification
  Set event information and image e-mail notifications.

General Upload

[Upload]
Select [Upload Disabled], [HTTP Upload] or [FTP Upload] for the upload method.

Important

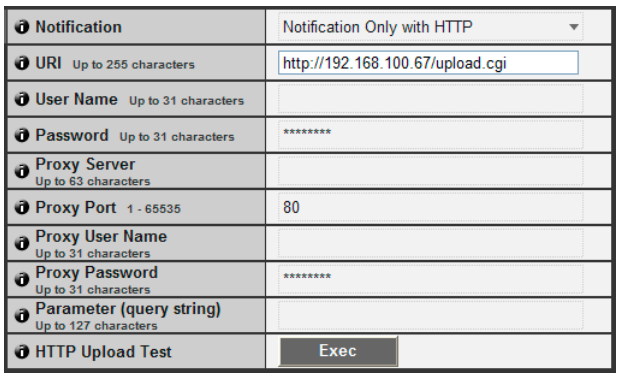
- If the upload function is used, either the [Event] menu must be set (P. 5-20) or the [Event] tab in the Intelligent Function Setting Tool (P. 6-25) must be set.
- If you are using both e-mail notification by text and image upload by HTTP/FTP, set [Image Size: Upload] (P. 5-13) to [320 x 240] or less.
- HTTP upload does not support SSL/TLS.
- If the camera is set to perform upload or e-mail notification continuously, not all images or e-mails may be sent depending on the image size and the network condition to the server. In this case, an event log message is displayed (P. 5-33).
- If the destination for HTTP/FTP upload or e-mail notification is set for a Windows operating system, IPsec communication cannot be applied.

Note

To lower the upload or e-mail notification load, try the following measures. Also check the settings including the network to the server.

- Reduce the image file size:
  - Set a lower value under [Image Quality] for JPEG (P. 5-13).
  - Set a lower value for [Image Size: Upload] for JPEG (P. 5-13).
- Reduce the uploading frequency:
  - Reduce the value in [Pre-event Buffer (number of image frames)] or [Post-event Buffer (number of image frames)] (P. 5-20).
  - If [Volume Detection Event] is enabled, disable [ON Event Operation] or [OFF Event Operation] (P. 5-20).
  - From the Intelligent Function Setting Tool [Event] tab > disable [ON Event Operation], [OFF Event Operation] or [Detected mode Operation] (P. 6-28).
  - If [External Device Input Event] is enabled, disable [ON Event Operation] or [OFF Event Operation] (P. 5-21).
  - If [Timer Event Setting] is enabled, increase the value in [Repeat Interval] (P. 5-22).

HTTP Upload



① [Notification]
Select [Notification Only with HTTP] or [Image attached Notification with HTTP] as the content of notification.

② [URI]
Enter the URI to be uploaded to (using up to 255 characters).

③ [User Name], [Password]
Enter the user name and password required for authentication.
The authentication method is BASIC authentication.

④ [Proxy Server]
Enter the host name or IP address of the proxy server (using up to 63 characters).

⑤ [Proxy Port]
Enter the port number of the proxy server (factory default setting is [80]).

⑥ [Proxy User Name], [Proxy Password]
Enter the user name and password of the proxy server.
The authentication method is BASIC authentication.

⑦ [Parameter (query string)]
Enter the parameter (using up to 127 characters).
Parameters can be specified using the “%” character (P. 8-4).

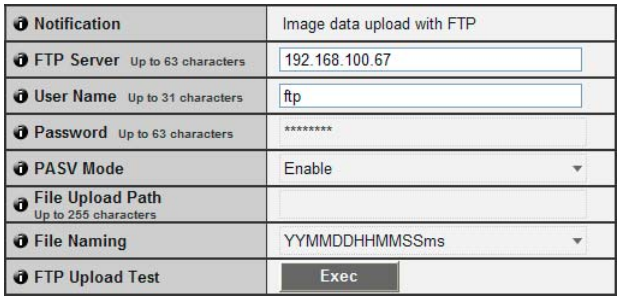
⑧ [HTTP Upload Test]
Clicking [Exec] initiates an upload test based on the settings currently entered. It is not necessary to click [Apply].

For a password, first click [Exec], then [Apply] the password.

Important

Enter [Proxy Server], [Proxy Port], [Proxy User Name] and [Proxy Password] if connecting via a proxy.

FTP Upload



① [Notification]
The content of notification is set to [Image data upload with FTP].

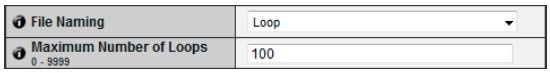
② [FTP Server]
Enter the host name or IP address of the FTP server (using up to 63 characters).

③ [User Name], [Password]
Enter the user name and password required for authentication.

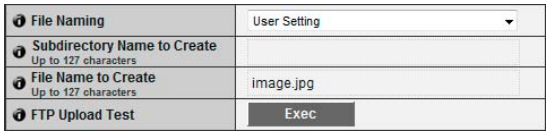
④ [PASV Mode]
Select [Enable] or [Disable] for the PASV mode when uploading via FTP.

⑤ [File Upload Path]
Enter the path to the folder where the image file is to be uploaded to (using up to 255 characters).

⑥ [File Naming]
Set a desired file naming rule.
[YYYYMMDDHHMMSSms]
Images are uploaded according to the file name format of "{year}{month}{day}{hour}{minute}{second}{ms}.jpg."
(Example: 20080123112122000.jpg)
[YYYYMMDD Directory/HHMMSSms]
A subdirectory named "{year}{month}{day}" is created first, and then the image is uploaded using the file name "{hour}{minute}{second}{ms}.jpg."
(Example: 20080123/112122000.jpg)
[Loop]
Images are loaded with a file name numbered up to the value set in [Maximum Number of Loops].
(Example: 0000.jpg, 0001.jpg)
[User Setting]
Images are uploaded according to the file naming method specified in [Subdirectory Name to Create] and [File Name to Create].



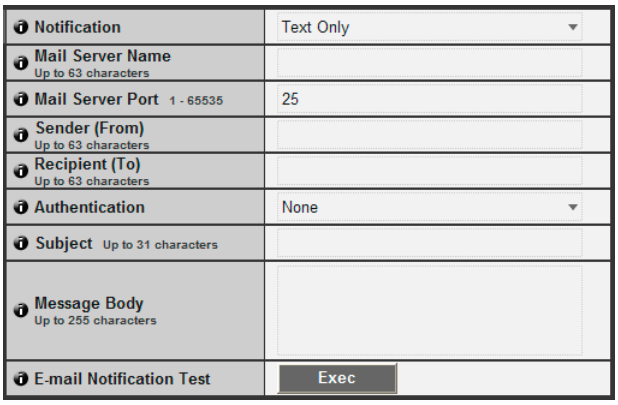
[Maximum Number of Loops]
If [Loop] is set under [File Naming], enter the maximum number of loops in the range of 0 to 9999.



[Subdirectory Name to Create], [File Name to Create]
If file naming is set to [User Setting], enter the subdirectory name to be created as well as the name of the created file (using up to 127 characters). Parameters can be specified in the entry with the "%" character (P. 8-4).

⑦ [FTP Upload Test]
Clicking [Exec] initiates an upload test based on the settings currently entered. It is not necessary to click [Apply].
For a password, first click [Exec], then [Apply] the password.

E-mail Notification



① [Notification]
Select [Text Only] or [Text with Image] as the content of notification. If [Upload] is set to [Upload Disabled], [Text with Image] will not be available.

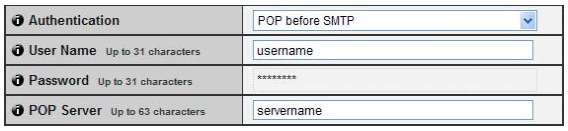
② [Mail Server Name]
Enter the host name or IP address of the SMTP server (using up to 63 characters).

③ [Mail Server Port]
Enter the port number of the SMTP server (factory default setting is [25]).

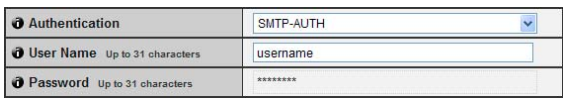
④ [Sender (From)]
Set the e-mail address of the sender (using up to 63 characters).

⑤ [Recipient (To)]
Set the e-mail address of the recipient (using up to 63 characters).

⑥ [Authentication]
Select [None], [POP before SMTP] or [SMTP-AUTH] for the e-mail authentication method.
Set an appropriate method according to the authentication method used by the SMTP server to send to.



[User Name], [Password], [POP Server]
If [POP before SMTP] is selected as the e-mail authentication mode, enter the user name and password as well as the host name or IP address of the POP server required for authentication.



[User Name], [Password]
If [SMTP-AUTH] is selected as the e-mail authentication method, enter the user name and password required for authentication.

⑦ [Subject]
Enter the subject of the e-mail to be sent using up to 31 ASCII characters.

⑧ [Message Body]
Enter the message (text) of the e-mail to be sent using up to 255 ASCII characters. Parameters can be specified with the “%” character (P. 8-4).

⑨ [E-mail Notification Test]
Clicking [Exec] initiates an e-mail notification test based on the settings currently entered. It is not necessary to click [Apply].
For a password, first click [Exec], then [Apply] the password.

[Server]
Setting the Image Server, Audio Server and HTTP Server

The following can be set here.

- Image Server
  Set the image transmission from the camera.
- Audio Server
  Set the audio transmission/reception.
- HTTP Server
  Set the authentication method, HTTP port and web page delivery.

Image Server

Maximum Number of Clients 0 - 30	30
Camera Control Queue Length 0 - 30	30
Maximum Connection Time (sec.) 0 - 65535	0
Camera Control Time (sec.) 1 - 3600	20

① [Maximum Number of Clients]
Set the maximum number of clients that can be connected to the camera at the same time. Up to 30 clients can be set.
If 0 is set, connection is prohibited except for the Administrator.

② [Camera Control Queue Length]
Set the maximum queue length for clients requesting camera control privilege from the viewer. The maximum number is 30. Enter an integer from 0 to 30. If 0 is set, camera control is prohibited except for the Administrator.

③ [Maximum Connection Time (sec.)]
Set the time in seconds during which an individual client can connect to the camera. The maximum number is 65535. Enter an integer from 0 to 65535. If 0 is set, the connection time becomes unlimited.

④ [Camera Control Time (sec.)]
Set the maximum time during which the viewer can control the camera. The maximum number is 3600. Enter an integer from 1 to 3600.

Audio Server

Audio Transmission from the Camera	Enable
Input Volume 1 - 100	50
Voice Activity Detection	Disable
Audio Reception from Viewer	Enable
Output Volume 1 - 100	50
Echo Canceller	Disable
Audio Input	Line In

① [Audio Transmission from the Camera]
When [Enable] is selected, the audio input through the microphone attached to the camera can be transmitted to the Viewer.

② [Input Volume]
Set the volume of input for the microphone connected to the camera in the range of 1 to 100. The greater the value, the larger the input volume becomes.

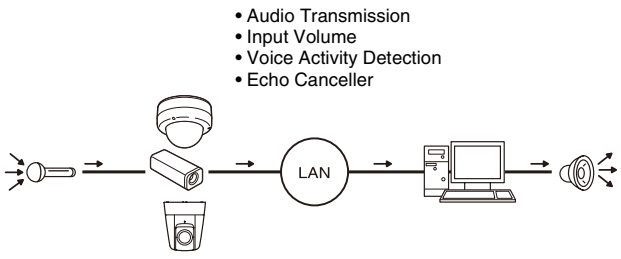
③ [Voice Activity Detection]
If [Enable] is selected, the audio transmission is stopped temporarily when no audio is output. This way, the load of the applicable network can be reduced.

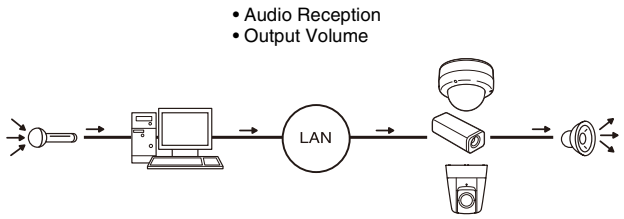
④ [Audio Reception from Viewer]
If [Enable] is selected, the audio received from the bundled RM Viewer can be output from the speaker with amplifier connected to the camera.

⑤ [Output Volume]
Set the volume of output for the speaker connected to the camera in the range of 1 to 100. The greater the value, the larger the output volume becomes.

⑥ [Echo Canceller]
If [Enable] is selected, echo between the microphone and speaker is suppressed.

⑦ [Audio Input]
Set the microphone input. Select [Line In], [Microphone In (dynamic microphone)] or [Microphone In (condenser microphone)].





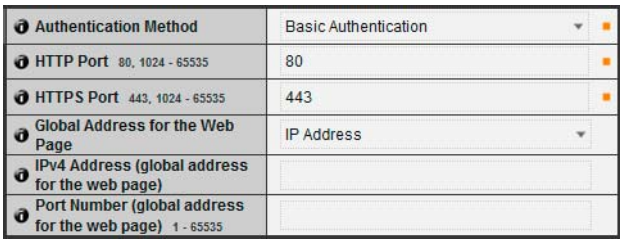
Caution
Switch line in and microphone in on each setting page according to the specification of the microphone (P. 5-18). Using the wrong input may damage the camera and/or microphone. Be sure to configure settings correctly.

Important

The volume, sound quality, etc., may change depending on the characteristics of the microphone used.

- If [Input Volume] or [Echo Canceller] settings are changed after setting volume detection, check the detection setting again.
- RM Viewer is needed to when setting [Audio Reception from Viewer] to [Enable]. No sound will be output from the camera when using this function with VB-M700/600/40 Viewer since the viewer does not support transmitting sound.(P. 1-6)
- Connect a speaker with amplifier to the camera (“Audio Input/Output Terminals” in the “Installation Guide”).
- If [Enable] is selected under [Echo Canceller], the sound quality or volume may be affected. Utilize this function as necessary according to the installation environment and how the camera is used.
- When sending audio, carefully read the information in “Important” under “Audio Input/Output Terminals” in the “Installation Guide.”

HTTP Server


Authentication Method
Basic Authentication
HTTP Port 80, 1024 - 65535
80
HTTPS Port 443, 1024 - 65535
443
Global Address for the Web Page
IP Address
IPv4 Address (global address for the web page)
Port Number (global address for the web page) 1 - 65535

① [Authentication Method]
Set the authentication method used with the HTTP server to [Basic Authentication] or [Digest Authentication].

② [HTTP Port]
Set the HTTP port number to 80 or in the range of 1024 to 65535.
Normally [80] (factory default setting) is used.

③ [HTTPS Port]
Set the HTTPS port number to 443 or in the range of 1024 to 65535.
Normally [443] (factory default setting) is used.

④ [Global Address for the Web Page]
If a fixed global address is assigned to the camera using the NAT function of the router, set the global address and port number here. If [IP Address] is selected, enter the IP address specified in the [IPv4 Address] field. If [Host Name] is selected, the host name specified in [DNS] under [Network] will be used. Set the necessary items under [DNS] (P. 5-6).

Important

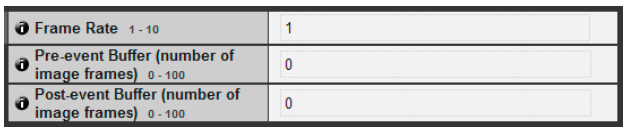
- If the setting of [HTTP Port] or [HTTPS Port] is changed, the camera may become inaccessible from the active web browser. Check beforehand the precautions in “Important” in “[Reboot Item] Setting Items Requiring Rebooting” (P. 5-32).
- If [IP Address] is selected under [Global Address for the Web Page], be sure to set both [IPv4 Address (global address for the web page)] and [Port Number (global address for the web page)]. If [Host Name] is selected, also be sure to set [Host Name] under [DNS] in [Network] on the Setting page.

[Event]
Setting Image Buffer, Volume Detection, Audio Playback and Timer

The following can be set here.

- Image Buffer
  Set the items associated with the temporary saving of images in the image buffer.
- Volume Detection
  Set the operation to be performed at the time of volume detection.
- External Device Input
  Set the operation to be performed when an event is triggered by input from an external device.
- Timer
  Set timer events.
- Sound Clip Upload
  Set the audio file registered as playback.

Image Buffer



① [Frame Rate]
Enter the frame rate of image to be uploaded.

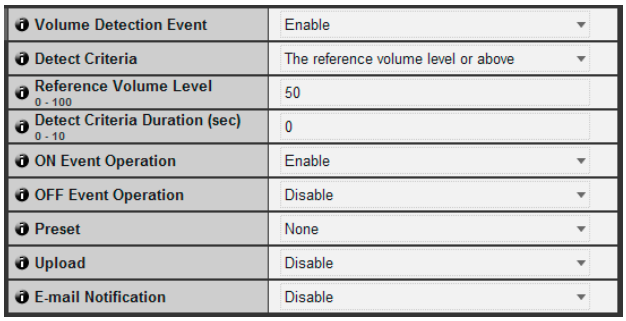
② [Pre-event Buffer (number of image frames)]
Set the number of images to be buffered before the event.

③ [Post-event Buffer (number of image frames)]
Set the number of images to be buffered after the event.

Important

- The maximum image buffer size capacity is approx. 6 MB. If a large image size is set, the Frame Rate, Pre-event Buffer and Post-event Buffer may not be achieved as specified (P. 5-20).
- If buffering cannot be achieved as specified, an event log message appears (P. 5-33).
  Before using a large image size, confirm that no messages appear in the event log (P. 5-33).
- Regardless of the image buffer frame rate setting, only a single image will be uploaded when a timer event occurs.

Volume Detection



① [Volume Detection Event]
Set volume detection to [Enable] or [Disable].

② [Detection Criteria]
Set the criteria for generating volume detection events to [The reference volume level or above] or [The reference volume level or below].

③ [Reference Volume Level]
Set the reference volume level for detection in the range of 0 to 100.
Perform an actual test at the volume level before setting the value.

④ [Detect Criteria Duration (sec)]
Set the duration of the detect criteria in the range of 0 to 10 (sec.). When the status meeting the detect criteria has continued for the duration or longer, an ON event is generated.

⑤ [ON Event Operation]
Select the operation to be performed upon an ON event. If [Enable] is selected, ⑦ [Preset] (VB-M40 only), ⑧ [Upload] and ⑨ [E-mail Notification] will be executed according to their settings upon an ON event.

⑥ [OFF Event Operation]
Select the operation to be performed upon an OFF event. If [Enable] is selected, ⑦ [Preset] (VB-M40 only), ⑧ [Upload] and ⑨ [E-mail Notification] will be executed according to their settings upon an OFF event.

⑦ [Preset] M40
If a preset is specified, the camera will orient automatically to the specified preset position when a volume detection event occurs. To use presets, it is necessary to set the presets with the Preset Setting Tool under Admin Tools (P. 6-16). If there is no need for additional camera operation, select [None].

⑧ [Upload]
Select the upload operation to be performed. If [Enable] is selected, upload is performed when a volume detection event occurs. To use this function, the [General Upload] sub-menu and [HTTP Upload] or [FTP Upload] sub-menu must also be set from the [Upload] menu (P. 5-15).

⑨ [E-mail Notification]
Select the e-mail notification operation to be performed. If [Enable] is selected, e-mail notification is performed when a volume detection event occurs. To use this function, the [E-mail Notification] sub-menu must also be set from the [Upload] menu (P. 5-17).

Important

- The volume detection function is temporarily disabled during audio file playback and audio transmission from RM Viewer.
- Volume detection and external device output cannot be interlocked.
- For notes on use of volume detection, see "Safety Precautions" in "Precautions for Use of Built-In Camera Functions and Bundled Software" (P. vi).

External Device Input

External Device Input Event	Enable
ON/OFF Input Inversion	Disable
ON Event Operation	Enable
OFF Event Operation	Disable
Preset	None
Upload	Disable
E-mail Notification	Disable
Audio Playback at ON Event	Enable
Audio Playback at OFF Event	Disable
Sound Clip	SAMPLE1
Volume 1 - 100	50

① [External Device Input Event]
Set external device input events to [Enable] or [Disable].

② [ON/OFF Input Inversion]
Select [Enable] or [Disable] for external device ON/OFF input inversion. If [Enable] is selected, ON input from an external device will generate an OFF event.

③ [ON Event Operation]
Select the operation to be performed upon an ON event. If [Enable] is selected, ⑤ [Preset] (VB-M40 only), ⑥ [Upload] and ⑦ [E-mail Notification] will be executed according to their settings upon an ON event.

④ [OFF Event Operation]
Select the operation to be performed upon an OFF event. If [Enable] is selected, ⑤ [Preset] (VB-M40 only), ⑥ [Upload] and ⑦ [E-mail Notification] will be executed according to their settings upon an OFF event.

⑤ [Preset] M40
If a preset is specified, the camera will automatically orient to the specified preset position when an external device input event occurs. To use presets, it is necessary to set presets with the Preset Setting Tool under Admin Tools (P. 6-16). If there is no need for additional camera operation, select [None].

⑥ [Upload]
Select the upload operation to be performed. If [Enable] is selected, upload is performed when an external device input event occurs. To use this function, the [General Upload] sub-menu and the [HTTP Upload] or [FTP Upload] sub-menu must also be set from the [Upload] menu (P. 5-15).

⑦ [E-mail Notification]
Select the e-mail notification operation to be performed. If [Enable] is selected, e-mail notification will be performed when an external device input event occurs, provided that the event is set to [Enable]. To use this function, the [E-mail Notification] sub-menu must also be set from the [Upload] menu (P. 5-17).

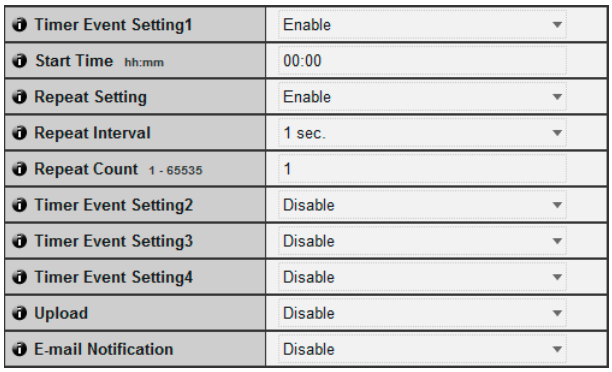
⑧ [Audio Playback at ON Event]
Select the audio playback operation to be performed upon an ON event. If [Enable] is selected, the audio designated in [Sound Clip] will playback when an ON event is input from an external device.

⑨ [Audio Playback at OFF Event]
Select the audio playback operation to be performed upon an OFF event. If [Enable] is selected, the audio designated in [Sound Clip] will playback when the event input from an external device turns OFF.

⑩ [Sound Clip]
Select the sound clip to be played. For registration of sound clips, see P. 5-22.

⑪ [Volume]
Select the volume of sound clips using an integer of 1 to 100. The greater the value, the louder the volume becomes.

Timer



① [Timer Event Setting]
Select [Enable] or [Disable] for timer event.

② [Start Time]
Set the start time of the timer event in 24-hour format.

③ [Repeat Setting]
If [Enable] is selected, timer events will be generated according to settings in ④ [Repeat Interval] and ⑤ [Repeat Count].

④ [Repeat Interval]
Select [1 sec.] [5 sec.] [10 sec.] [30 sec.] [1 min.] [5 min.] [10 min.] [15 min.] [20 min.] [30 min.] [1 hour] [3 hours] [6 hours] or [12 hours] for the upload and e-mail notification repeat intervals.

⑤ [Repeat Count]
Set the repeat count for uploads and e-mail notification in the range of 1 to 65535.

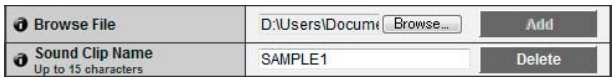
⑥ [Upload]
Select the upload operation to be performed. If [Enable] is selected, upload is performed at the set intervals. To use this function, the [General Upload] sub-menu and the [HTTP Upload] or [FTP Upload] sub-menu must also be set from the [Upload] menu (P. 5-15).

⑦ [E-mail Notification]
Select the e-mail notification operation to be performed. If [Enable] is selected, e-mail notification is performed when a timer event occurs. To use this function, the [E-mail Notification] sub-menu must also be set from the [Upload] menu (P. 5-17).

Important

[Timer Event Setting] repeats in a 24-hour cycle.
When valid times set by multiple [Timer Event Setting] overlap, the timer event with the latest [Start Time] setting becomes effective.
The previously performed timer event stops until its Start Time on the next day.

Sound Clip Upload



① [Browse File]
Specify the audio file you want to register as the sound clip, and then click [Add].

② [Sound Clip Name]
Set a name for the audio file to be registered as sound playback (up to 15 alphanumeric characters). If a blank field is applied, the sound clip will be deleted. To delete a registered audio file, click [Delete] next to the sound clip name you want to delete.

Note

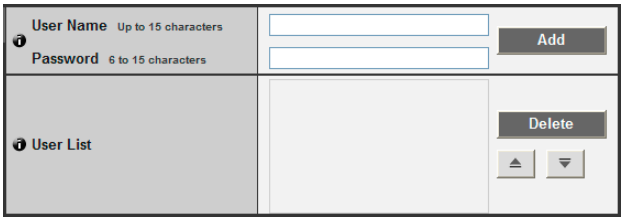
Audio files must be 20 seconds or shorter and must be ".wav" files (μ-law PCM 8 bits sampling frequency 8000 Hz, monaural).

[Access Control] Setting User Access Privileges

The following can be set here.

- Authorized User Account
  Register who can access this camera.
- User Authority
  Set the authorities for authorized users and guest users.
- IPv4 Host Access Restrictions
  Specify the hosts from which IPv4 access is permitted and restricted.
- IPv6 Host Access Restrictions
  Specify the hosts from which IPv6 access is permitted and restricted.

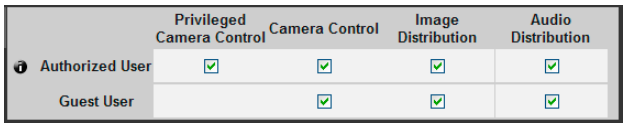
Authorized User Account



① [User Name], [Password]
Enter the user name and password and then click [Add]. The authorized user will be added to the user list.
The user name can consist of up to 15 (single-byte) characters using A to Z, a to z, 0 to 9, "-" (hyphen) and "_" (underscore).
The password can consist of 6 to15 (single-byte) ASCII characters (space or printable characters).

② [User List]
A list of authorized users is shown. User authorities can be set for these users. Up to 50 users can be registered in addition to the Administrator (root).
Also, the user list can be sorted using the ▲ ▼ buttons on the right.
To delete a user, select the applicable user from the user list and then click [Delete].

User Authority

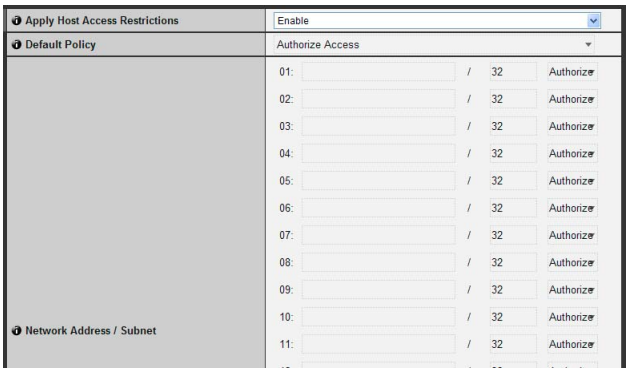


[Privileged Camera Control], [Camera Control], [Image Distribution], [Audio Distribution]
Set the user authorities of authorized users and guest users. Select the checkboxes corresponding to the items you want to permit for each user.

Note

Authorized users have higher authorities than guest users.
For details, see "User Authorities and Camera Control Privileges" (P. 7-2).

IPv4 Host Access Restrictions



① [Apply Host Access Restrictions]
Set IPv4 host access restrictions to [Disable] or [Enable].

② [Default Policy]
If IPv4 host access restrictions are applied, select [Authorize Access] or [Prohibit Access] for the default policy.

③ [Network Address / Subnet]
Create a list of permitted hosts and restricted hosts and set IPv4 address access for each host to [Authorize] or [Prohibit].
You can specify the subnet and set access restrictions by network or host.
If access is prohibited, access to all ports is restricted.

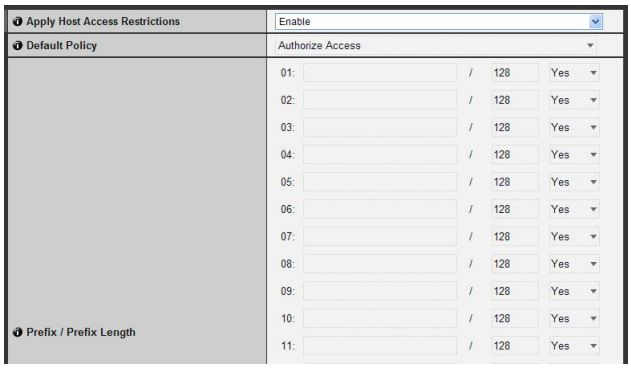
Important

- To prohibit access via a proxy server in HTTP connection, a proxy server address must be set.
- If host access restriction is set mistakenly, access to the setting pages themselves may be prohibited, in which case restoring the factory default settings will become the only means for recovery.

Note

If the same address is duplicated, the policy for the address that appears highest on the list will be applied.

IPv6 Host Access Restrictions



① [Apply Host Access Restrictions]
Set IPv6 host access restrictions to [Disable] or [Enable].

② [Default Policy]
If IPv6 host access restrictions are applied, select [Authorize Access] or [Prohibit Access] for the default policy.

③ [Prefix / Prefix Length]
Create a list of permitted hosts and restricted hosts and set IPv6 address access for each host to [Yes] or [No]. You can specify the prefix length and set access restriction by network or host.
If access is prohibited, access to all ports is restricted.

[IPsec] Setting IPsec

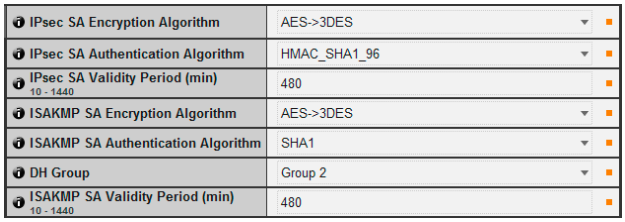
The following can be set here.

- IPsec
  Set the IPsec setting method.
- Auto Key Exchange Settings
  Set auto key exchange.
- IPsec Set
  IP security can be specified through auto key exchange or manual setting with up to five communicating devices.

IPsec

① [IPsec]
Key settings for use with IPsec can be selected as [Auto Key Exchange] or [Manual].

Auto Key Exchange Settings



① [IPsec SA Encryption Algorithm]
Set the IPsec SA encryption algorithm to [AES->3DES], [AES->3DES->DES] or [AES->3DES->DES ->NULL].
The specified algorithm will be checked for an applicable encryption algorithm starting from the left.

② [IPsec SA Authentication Algorithm]
Set the IPsec SA authentication algorithm to [HMAC_SHA1_96] or [HMAC_SHA1_96-> HMAC_MD5_96].
The specified algorithm will be checked for an applicable authentication algorithm starting from the left.

③ [IPsec SA Validity Period (min)]
Set the duration of validity for IPsec SA (factory default setting is [480]).

④ [ISAKMP SA Encryption Algorithm]
Set the SA encryption algorithm for use with auto key exchange protocol IKE to [AES->3DES] or [AES-> 3DES->DES].

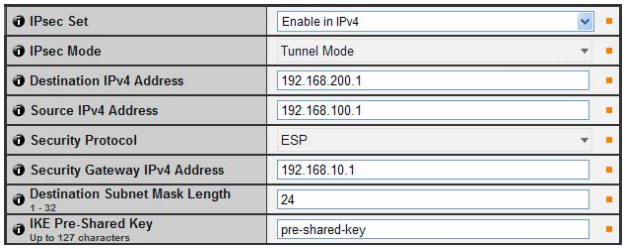
⑤ [ISAKMP SA Authentication Algorithm]
Set the SA authentication algorithm for use with auto key exchange protocol IKE to [SHA1] or [SHA1->MD5].

⑥ [DH Group]
Select [Group 2] or [Group 2->Group 1] for the key generation information that will be used in the DH algorithm for key exchange via auto key exchange protocol IKE.

⑦ [ISAKMP SA Validity Period (min)]
Set the duration of validity for ISAKMP SA (factory default setting is [480]).

IPsec Set (Auto Key Exchange)

IPsec Sets 1 to 5 are available, and you can specify IPsec settings for one communication device for each IPsec Set.



① [IPsec Set]
Set IPsec Set to [Disable], [Enable in IPv4] or [Enable in IPv6].

② [IPsec Mode]
Set IPsec mode to [Tunnel Mode] or [Transport Mode].

③ [Destination IPv4 Address], [Destination IPv6 Address]
Enter the IP address of the connection destination.

④ [Source IPv4 Address], [Source IPv6 Address]
Enter the IP address of the source.

⑤ [Security Protocol]
Set the IPsec protocol to [ESP], [AH] or [ESP and AH].
If [ESP] is selected, enter only the setting items relating to ESP.
If [AH] is selected, enter only the setting items relating to AH.
If [ESP and AH] is selected, enter all setting items.

⑥ [Security Gateway IPv4 Address], [Security Gateway IPv6 Address]
If IPsec mode is set to [Tunnel Mode] in ②, set the IP address of the security gateway.

⑦ [Destination Subnet Mask Length] (IPv4), [Destination Prefix Length] (IPv6)
This setting is required only if IPsec mode is set to [Tunnel Mode] in ②.
If IPv6 is used, enter a desired prefix length for the connection destination in the range of 16 to 128.
If IPv4 is used, enter a desired length in the range of 1 to 32.

⑧ [IKE Pre-Shared Key]
Enter the pre-shared key for IKE (auto key exchange) (up to 127 characters).

Important

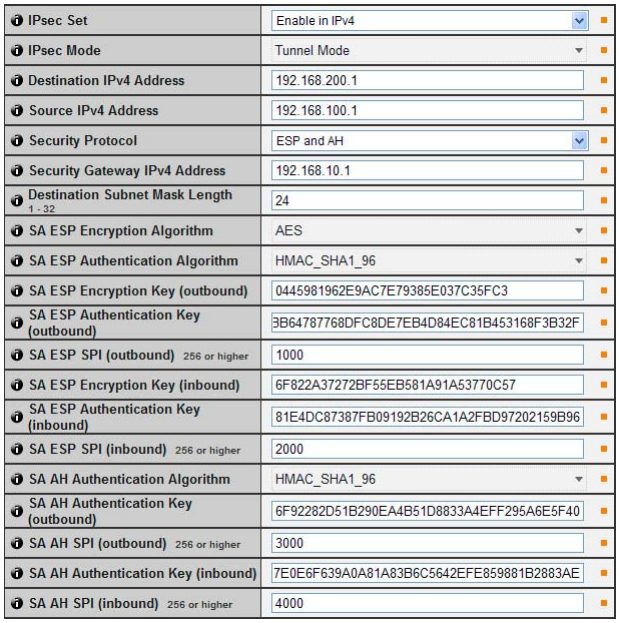
If the camera is rebooted during auto key exchange communication, a connection error may result after rebooting. In this case, connect again.

Note

If auto key exchange is used, it will take approximately 5 to 10 seconds before communication with the camera starts.

IPsec Set (Manual)

IPsec Sets 1 to 5 are available, and you can specify IPsec settings for one communication device for each IPsec Set.



① [IPsec Set]
Set IPsec Set to [Disable], [Enable in IPv4] or [Enable in IPv6].

② [IPsec Mode]
Set IPsec mode to [Tunnel Mode] or [Transport Mode].

③ [Destination IPv4 Address], [Destination IPv6 Address]
Enter the IP address of the connection destination.

④ [Source IPv4 Address], [Source IPv6 Address]
Enter the IP address of the source.

⑤ [Security Protocol]
Set the IPsec protocol to [ESP], [AH] or [ESP and AH].
If [ESP] is selected, enter only the setting items relating to ESP.
If [AH] is selected, enter only the setting items relating to AH.
If [ESP and AH] is selected, enter all setting items.

⑥ [Security Gateway IPv4 Address], [Security Gateway IPv6 Address]
If [IPsec Mode] is set to [Tunnel Mode] in ②, set the IP address of the security gateway.

⑦ [Destination Subnet Mask Length] (IPv4), [Destination Prefix Length] (IPv6)
This setting is required only if [IPsec Mode] is set to [Tunnel Mode] in ②.
If IPv6 is used, enter a desired prefix length for the connection destination in the range of 16 to 128.
If IPv4 is used, enter a desired length in the range of 1 to 32.

- If [Security Protocol] is set to [ESP] or [ESP and AH] in ⑤, ⑧ [SA ESP Encryption Algorithm] to ⑮ [SA ESP SPI (inbound)] must be set.

⑧ [SA ESP Encryption Algorithm]
Set the ESP encryption algorithm to [AES], [3DES], [DES] or [NULL] according to the encryption algorithm supported by the device to connect to.
Normally [AES] or [3DES] is recommended.

⑨ [SA ESP Authentication Algorithm]
Set the ESP authentication algorithm to [HMAC_SHA1_96], [HMAC_MD5_96] or [No Authentication] according to the authentication algorithm supported by the device to connect to.
If [ESP] is used alone, [No Authentication] cannot be selected.

⑩ [SA ESP Encryption Key (outbound)]
Set the SA encryption key for outbound. If [AES], [3DES] or [DES] was selected in ⑧, set a 128-bit, 192-bit or 64-bit hexadecimal, respectively. This item need not be set if [NULL] was selected.

⑪ [SA ESP Authentication Key (outbound)]
Set the SA authentication key for outbound. If [HMAC_SHA1_96] or [HMAC_MD5_96] was selected in ⑨, set a 160-bit or 128-bit hexadecimal, respectively. This item need not be set if [No Authentication] was selected.

⑫ [SA ESP SPI (outbound)]
Set the SA SPI value for outbound.
Set a desired value in the range of 256 to 4294967295.

⑬ [SA ESP Encryption Key (inbound)]
Set the SA encryption key for inbound.
If [AES], [3DES] or [DES] was selected in ⑧, set a 128-bit, 192-bit or 64-bit hexadecimal, respectively. This item need not be set if [NULL] was selected.

⑭ [SA ESP Authentication Key (inbound)]
Set the SA authentication key for inbound.
If [HMAC_SHA1_96] or [HMAC_MD5_96] was selected in ⑨, set a 160-bit or 128-bit hexadecimal, respectively. This item need not be set if [No Authentication] was selected.

⑮ [SA ESP SPI (inbound)]
Set the SA SPI value for inbound.
Set a desired value in the range of 256 to 4294967295.
Since this setting is used as an ID for identifying the SA, be careful not to specify an inbound SPI whose value is already used in the SPI for other ESP.

- If [Security Protocol] was set to [AH] or [ESP and AH]] in ⑤, ⑯ [SA AH Authentication Algorithm] to ⑳ [SA AH SPI (inbound)] must be set.

⑯ [SA AH Authentication Algorithm]
Set the AH authentication algorithm to [HMAC_SHA1_96] or [HMAC_MD5_96] according to the authentication algorithm supported by the device to connect to.

⑰ [SA AH Authentication Key (outbound)]
Set the SA authentication key for outbound. If [HMAC_SHA1_96] or [HMAC_MD5_96] was selected in ⑯, set a 160-bit or 128-bit hexadecimal, respectively.

⑱ [SA AH SPI (outbound)]
Set the SA SPI value for outbound.
Set a desired value in the range of 256 to 4294967295.

⑲ [SA AH Authentication Key (inbound)]
Set the SA authentication key for inbound. If [HMAC_SHA1_96] or [HMAC_MD5_96] was selected in ⑯, set a 160-bit or 128-bit hexadecimal, respectively.

⑳ [SA AH SPI (inbound)]
Set the SA SPI value for inbound.
Set a desired value in the range of 256 to 4294967295.
Since this setting is used as an ID for identifying the SA, be careful not to specify an inbound SPI whose value is already used in the SPI for another AH.

Important

- To run this camera with IPsec, the communicating devices and network must be set beforehand. Contact your System Administrator for these settings.
- If any setting is changed from the [IPsec] menu, the camera may become inaccessible from the active web browser. Check beforehand the precautions in “Important” in “[Reboot Item] Setting Items Requiring Rebooting” (P. 5-32).

Note

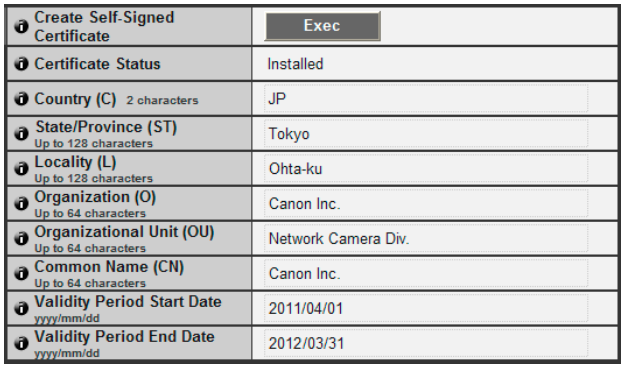
If IPsec is used, video transmission performance drops.

[SSL/TLS] Setting HTTP Communication Encryption

The following can be set here.

- Certificates
  Create an SSL/TLS certificate.
- Certificate Management
  Manage the SSL/TLS certificate.
- Encrypted Communications
  Set the encypted communication.

Certificates



① [Create Self-Signed Certificate]
After entering each of the following settings, click [Exec] to create a self-signed certificate. Follow the instructions in the message and reboot. The certificate created will take effect after rebooting.

Note

Creating a certificate takes time, so it is recommended that you stop video transmission and upload processes.

② [Certificate Status]
If no certificate is installed, [Not Installed] will appear. If a certificate is installed, [Installed] will appear.

③ [Country (C)]
Enter the country code.

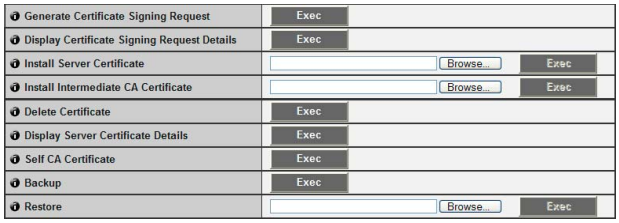
④ [State/Province (ST)], [Locality (L)], [Organization (O)], [Organizational Unit (OU)], [Common Name (CN)]
Enter state/province name, locality, organization name, organizational unit and common name in ASCII characters (spaces or printable characters). Enter a FQDN format host name, etc. to set the common name (required).

⑤ [Validity Period Start Date], [Validity Period End Date]
Set the validity period of the certificate to be created in the range of 2001/01/01 to 2031/12/31 (required when creating a self-signed certificate).

Important

With regard to security, it is recommended that you use a self-signed certificate where complete security does not need to be ensured through operation tests, etc. For system operation, acquire and install a certificate issued by a CA.

Certificate Management



① [Generate Certificate Signing Request]
Click [Exec] to create server private key and a self-certification authority private key to generate a certificate signing request. Once processed, the certificate signing request will appear in a separate window.

Note

Generating a certificate signing request takes time, so it is recommended that you stop video transmission and upload processes.

② [Display Certificate Signing Request Details]
Click [Exec] to view the details of the certificate signing request.

③ [Install Server Certificate]
Perform this operation to install a server certificate. Click [Browse] to select the certificate file for installation, then click [Exec]. The certificate installed will take effect after rebooting.

④ [Install Intermediate CA Certificate]
Perform this operation to install an intermediate CA certificate. Select the certificate file to be installed using the [Browse] button and click [Exec]. The installed certificate will take effect after rebooting.

⑤ [Delete Certificate]
Click [Exec] to delete the certificate. However, if SSL communications are enabled, the certificate cannot be deleted. Set [SSL Communications] to [Disable] before deleting a certificate. The deletion will take effect after rebooting.

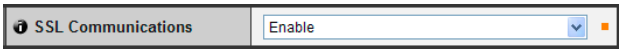
⑥ [Display Server Certificate Details]
Click [Exec] to view the details of the certificate.

⑦ [Self CA Certificate]
Used for the purpose of testing SSL communications, but otherwise not normally used.

⑧ [Backup]
Click [Exec] to perform a backup of the certificates and private key. This operation can only be performed via SSL communications.

⑨ [Restore]
Installs the certificates and private key from backup. Click [Browse] to select the backup file, then click [Exec]. This operation can only be performed via SSL communications, and will take effect after rebooting.

Encrypted Communications



① [SSL Communications]
Set SSL communications to [Disable] or [Enable]. The setting will take effect after rebooting.
However, if no certificate is installed, SSL communications cannot be changed to [Enable].

Note

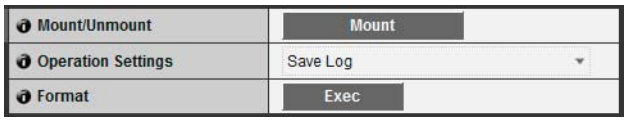
- It may take 15 minutes or more to generate an SSL key.
- If SSL communications are used, video transmission performance drops.
- Depending on the type of the certificate being installed on the camera, a dialog box may appear indicating that the web browser has accepted the certificate and a connection can be made.
  If the dialog box does not appear, register the CA certificate in the web browser.

[Memory Card] SD Memory Card Operations and Settings

The following can be set here.

- SD Card Operations
  Perform SD memory card operations.
- SD Card Information
  Display information about the SD memory card.

SD Card Operations (unmount status)



① [Mount/Unmount]
In unmount status, [Mount] will appear. Click [Mount] to mount the SD memory card.

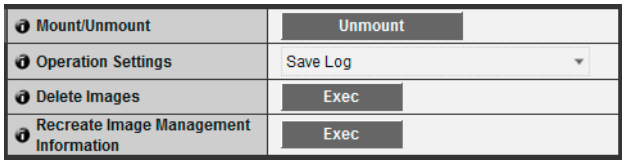
Note

SD and SDHC memory cards can be used with the camera. When an SD memory card is inserted in the card slot, it is mounted automatically. It is also mounted automatically if inserted in the camera at the time of booting.
For inserting and removing the SD memory card, see “Using an SD Memory Card” in the “Installation Guide.”

② [Operation Settings]
Set write operations to the SD memory card to [Save Log] or [Save Log and Images]. If [Save Log and Images] is selected, and a network problem occurs during upload or stream recording, images will be saved to the SD memory card at a frame rate of 1 fps (with image size and image quality set in [Video] (P. 5-13)).

③ [Format]
Click [Exec] to format the SD memory card.

SD Card Operations (mount status)



① [Mount/Unmount]
In mount status, [Unmount] will appear. Click [Unmount] to unmount the SD memory card.

Important

Be sure to perform the unmount process when turning off the power to the camera or removing the SD memory card. Failing to unmount first may result in management file problems or the SD memory card becoming inaccessible.

② [Operation Settings]
These settings are the same as ② [Operation Settings] in “SD Card Operations (unmount status).”

③ [Delete Images]
Click [Exec] to delete images from the SD memory card. During deletion, an indicator will appear to the right of [Exec].

Note

- It may take 10 minutes or more to delete images from the SD memory card.
- Deleting images takes time, so it is recommended that you stop video transmission and upload processes.

④ [Recreate Image Management Information]
Click [Exec] to recreate the image management information.
During re-creation, an indicator will appear to the right of [Exec]. The SD memory card is inaccessible during this time.

Note

- It may take 20 minutes or more to recreate image management information.
- Recreating image management information takes time, so it is recommended that you stop video transmission and upload processes.

SD Card Information

SD Card Recognition	Mounted
SD Card Operation Status	Operable
Image Management Information Status	Normal
Image Saving	Cannot Save
SD Card Capacity (KB)	1984640
Used Capacity (KB)	1019360

① [SD Card Recognition]
Displays the status of the SD memory card. The three status messages are [SD Card Not Inserted], [Not Mounted] and [Mounted].

② [SD Card Operation Status]
Displays the operation status of the SD memory card. The three status messages are as follows.
- [Operable]: This status indicates that any operation may be performed.
- [Recreating image management information]: This status indicates that image management information is being recreated. Other operations cannot be performed.
- [Deleting images]: This status indicates that images are being deleted. Other operations cannot be performed.

③ [Image Management Information Status]
Displays the status of the image management information. The two status messages are as follows.
- [Normal]: This status indicates that image management information is normal.
- [Image Management Information Recreation Required]: This status indicates that management files are corrupted or not consistent with saved image files. Image management information must be recreated.

④ [Image Saving]
Displays whether or not images can be saved to the SD memory card.
- [Can Save]: Indicates that images can be saved to the SD memory card.
- [Cannot Save]: Indicates that images cannot be saved to the SD memory card. This status may be caused when the SD memory card is not mounted, the image file count upper limit has been reached, the image management file is corrupted or the card is write-protected.

⑤ [SD Card Capacity (KB)]
Displays the SD memory card storage capacity.

⑥ [Used Capacity (KB)]
Displays information about storage used on the SD memory card.

Important

Information recorded to the SD memory card may be regarded as “personal information.” Take sufficient precautions for handling this information when releasing to third parties for disposal, transfer or repair.

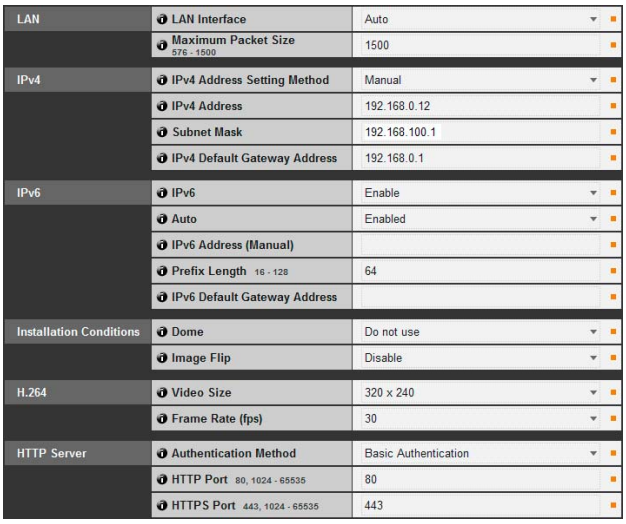
Note

- For accessing files saved to the SD memory card, see “SD Memory Card Access” (P. 8-2).
- Even if recording-mode stream transmission or uploading fail, the maximum number of images that can be stored on the SD memory card per method is 100,000.
- New files cannot be saved to the SD memory card if there is no free space or the file limit has been reached.

[Reboot Item] Setting Items Requiring Rebooting

The following settings that require rebooting before changes take effect can be found on a single page.

- LAN, IPv4, IPv6, H.264, Installation Conditions (VB-M40 only) HTTP Server



① [LAN]
LAN interface, maximum packet size settings (P. 5-5)

② [IPv4]
IP address, IPv4 settings, etc. (P. 5-5)

③ [IPv6]
Settings regarding IPv6 (P. 5-6)

④ [Installation Conditions] M40
Settings regarding camera installation conditions (P. 5-11)

⑤ [H.264]
Settings regarding H.264 image size and frame rate (P. 5-13)

⑥ [HTTP Server]
Authentication method, HTTP, and HTTPS port settings (P. 5-19)

Important

These settings relate to network connectivity. If any setting is changed to a value that may disable camera connection from the active web browser, a dialog box appears and alerts the user.

Click [OK] to apply the new setting.

Depending on the new setting, it may not be possible to connect to the camera again after rebooting. If this happens, a candidate URI for reconnecting the camera will appear if available.

Try the URI displayed to reconnect the camera.
If you cannot connect to the camera through the displayed URI, contact your System Administrator.

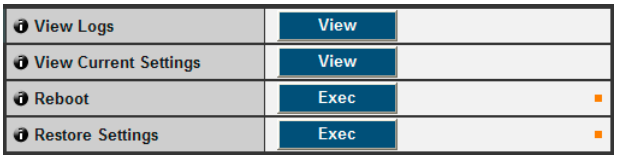
* Settings related to network connectivity in the [Reboot Item] menu are [LAN Interface], [Maximum Packet Size], [IPv4 Address Setting Method], [IPv4 Address], [Subnet Mask], [IPv4 Default Gateway Address], [IPv6], [Auto], [IPv6 Address (Manual)], [Prefix Length], [IPv6 Default Gateway Address], [HTTP Port] and [HTTPS Port].

[Maintenance]
Viewing Event Logs and Current Settings and Performing Maintenance

The following items can be used here.

- Tool
  Display or Initialize Camera Settings

Tool



① [View Logs]
Display a history of camera operations and connections to each viewer, etc.

② [View Current Settings]
Display a list of current settings.

③ [Reboot]
The camera is rebooted.

④ [Restore Settings]
Discard user-defined settings and restore all setting items to factory default settings except camera administrator password, network setting, date, time, time zone, SSL certificate and encrypted communications. Executing this operation will reboot the camera automatically.

Caution

- You must not turn off the camera while it is performing the [Restore Settings] operation. Turning off the camera at this stage may result in making it unable to boot correctly.
- M40 Never touch the camera head during initialization. Initialization failure or malfunction may result.

Note

- It is recommended that you write down all current setting values before restoring factory default settings in [Restore Settings] (P. 8-20).
- The camera can be restored to factory default settings using the reset switch as well. Note, however, that this will reset all camera settings to factory default settings except for date and time (P. 8-19).

Chapter 6

Admin Tools

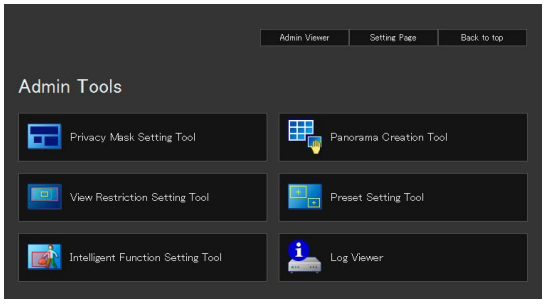
- ❏ Privacy Mask Setting
- ❏ Panorama Image Registration M40
- ❏ View Restriction Setting M40
- ❏ Camera Preset Setting M40
- ❏ Intelligent Function Setting
- ❏ Viewing Logs

Admin Tools Overview

Admin Tools consists of applications for remotely making camera settings, checking operating conditions, and acquiring logs.

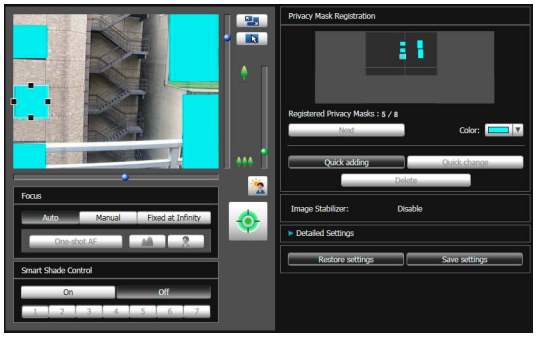
Admin Tools (P. 6-4)

This is the top page of Admin Tools. All tools can be launched from this page.



Privacy Mask Setting Tool (P. 6-5)

A tool that lets you hide areas you don't want to be seen by setting privacy masks. Up to eight areas can be masked, allowing thorough protection of privacy.

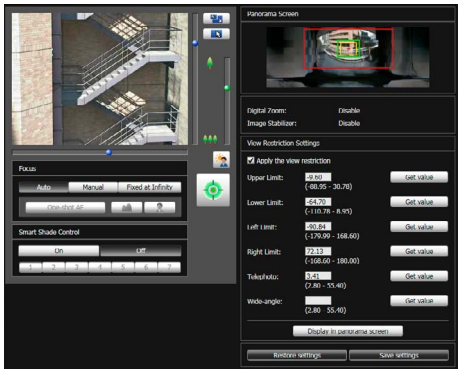


Panorama Creation Tool (P. 6-9) M40

A panorama image creation tool that shows the entire area that can be captured by this camera. Once a panorama image is captured and registered, it is shown in the panorama display panel of the viewer. As the panorama image is also shown when view restrictions and presets are set, you can see at a glance which part of the entire area the set area is occupying.

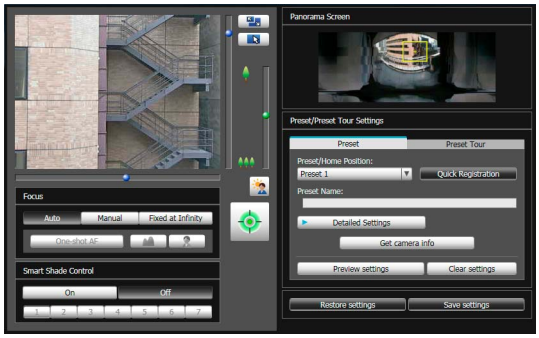
View Restriction Setting Tool (P. 6-12) M40

The View Restriction Tool restricts the viewable capture range in the VB Viewer. You can set the desired range with the mouse by referring to the preview in panorama mode.



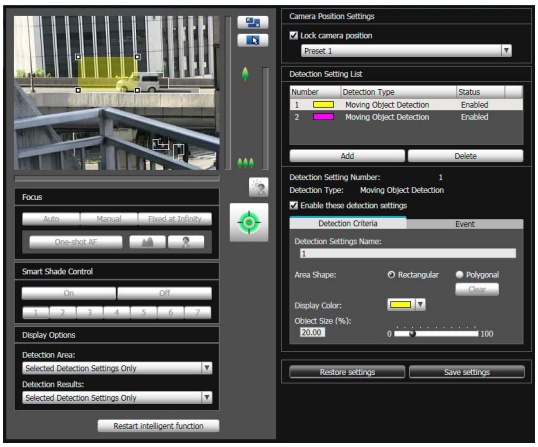
Preset Setting Tool (P. 6-16) M40

A tool that lets you set presets and the home position visually. You can make the desired settings with the mouse by referring to the preview in panorama mode. You can also set [Preset Tour] whereby the camera tours and monitors multiple presets.



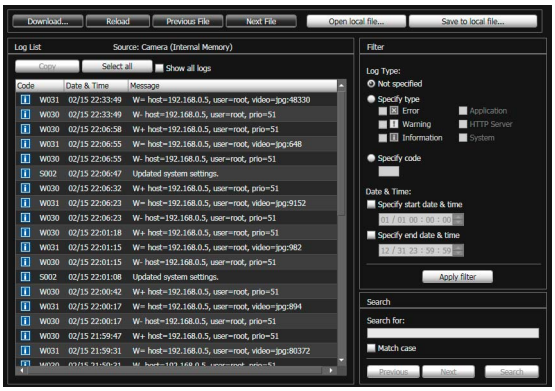
Intelligent Function Setting Tool (P. 6-22)

This tool is used to set intelligent functions that perform uploads, notify the viewer, record a log, etc., if a change has occurred in the captured image due to movement of a subject. By setting the conditions, you can let the camera detect events such as “abandoned object”, “removed object”, “camera tampering”, etc. You can view the image on the camera while setting the position and size of the detection area, detection conditions, etc.



Log Viewer (P. 6-31)

This viewer shows the logs of operating conditions of the camera.



Note

On the control panel of Windows, the decimal point in a value is always indicated by “.” regardless of the settings of [Region and Language]. Also, the date is shown in the “yyyy/mm/dd” or “mm/dd” format, while the time is shown in the “hh:mm:ss” format. (y, m, d, h, m, and s indicate year, month, day, hour, minute, and second, respectively)

Accessing the Admin Tools

Launching the Admin Tools

The Admin Tools can be launched from the top page of the camera.

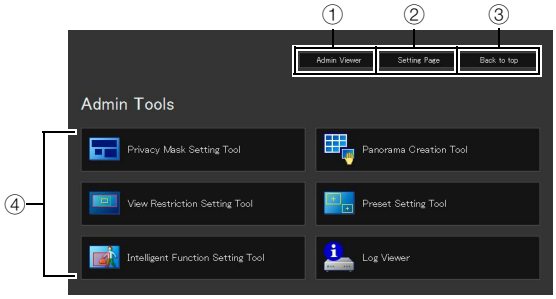
1 Start the top page of the camera (P. 4-2).

2 Click [Admin Tools].

A user authentication window appears.

3 Enter a user name and password and click [OK] (P. 4-2).

The Admin Tools top page will appear.



① [Admin Viewer]
Click to launch Admin Viewer.

② [Setting Page]
Click to launch Setting Menu.

③ [Back to top]
Click this button to navigate to the top page.

④ [Admin Tools]
Click the buttons of any tool to launch Admin Tools. Also, the first time one of the Admin Tools is launched, an authentication window is shown. Enter a user name and password.

Important

The certificates issued by Canon Inc. must be registered on any PCs using [Admin Tools]. (P. 4-3)

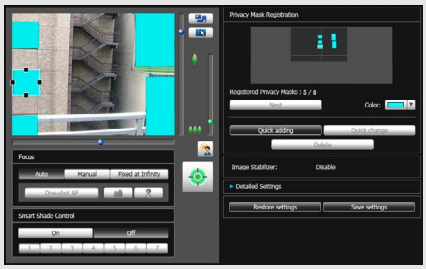
Note

- The first time you launch any of the Admin Tools, wait about 5 to 10 seconds until the software is downloaded to your PC. From then on, launching will be quicker. Also, when accessing via SSL encrypted communication, download time will take longer (about 20 to 30 seconds).
- None of the Admin Tools can be launched concurrently.

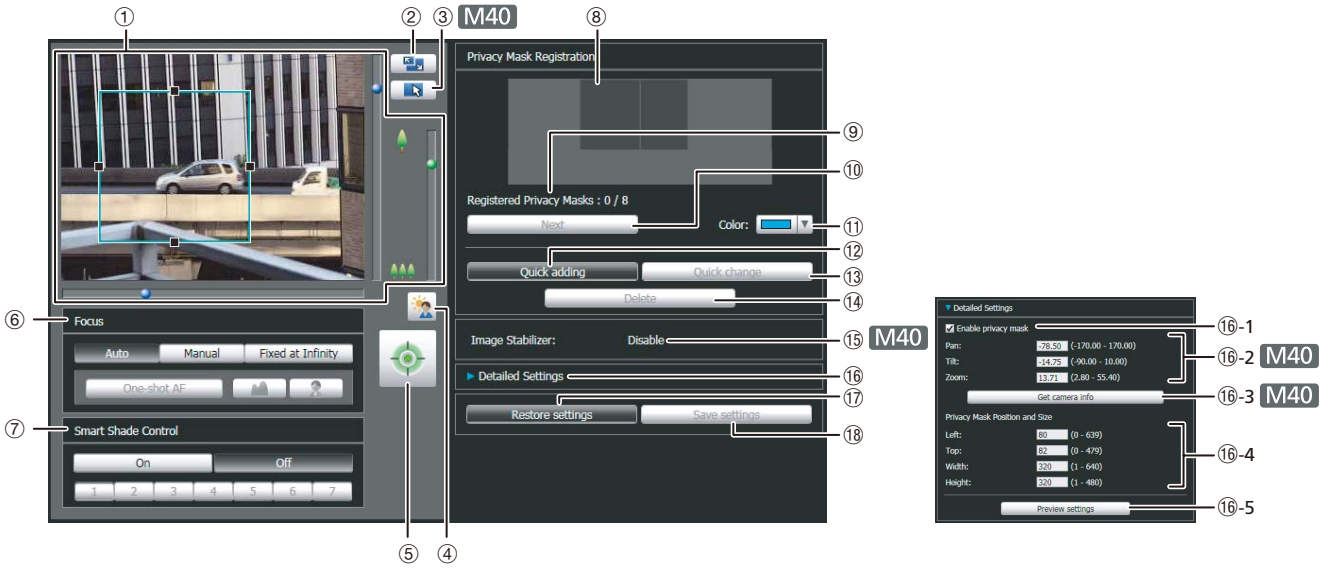
Privacy Mask Setting Tool

A tool that lets you cover certain areas on the camera image with privacy masks.
M40 When the camera is panned, tilted, or zoomed, the privacy mask area responds to the camera image.

You can set privacy masks for up to eight areas while checking the image on the camera.



Display Screen of Privacy Mask Setting Tool



① Image Display Area
The image currently captured by the camera is shown. Privacy masks can be resized/moved in the image display area.
M40
Pan, tilt, and zoom operations are the same as in the VB-M40 Viewer. For details, see “How to Operate the Viewer” (P. 7-5).

② [Switch Screen Size] button
Each time this button is clicked, the screen size of the image display area switches between “320 x 240” and “640 x 480.”

③ [Switch Mouse Operation] button M40
Each time this button is clicked, the screen switches between and , and the mouse operation in the image display area changes.
When the button is set to , privacy masks can be resized/moved. While in this mode, the camera orientation will not change.
When the button is set to , pan/tilt operations can be performed.

④ [BLC] (Back Light Compensation) button
This button turns on/off backlight compensation. This control is effective when the image is dark due to backlight.

⑤ [Obtain/release Camera Control] button
This button is used to obtain/release the camera control privileges. For details, see “Obtaining Camera Control Privileges” (P. 7-7). If camera control privileges have not yet been obtained elsewhere, such as in the Admin Viewer, the control privileges will be obtained the moment the Privacy Mask Setting Tool is launched.

⑥ [Focus]
Focus can be operated if the control privileges have been obtained. Focus operations are the same as in the Admin Viewer. For details, see “Setting the Focus” (P. 7-14).

⑦ [Smart Shade Control]
Smart shade control can be operated if the control privileges have been obtained. Smart shade control operations are the same as in the Admin Viewer. For details, see “Setting the Smart Shade Control” (P. 7-14).

⑧ Registered Privacy Mask Display Area (Capture area)
You can check the settings for the area where the camera can physically capture privacy masks.
M40
Even if a panorama image is saved in the camera, it will not be displayed here.

⑨ [Registered Privacy Masks]
Show the number of registered privacy masks. You can set up to eight privacy masks.

⑩ [Next]
When multiple privacy masks are set, clicking this button switches to the privacy mask selected.

⑪ [Color]
Choose the color for the privacy mask area. All privacy mask areas are set to the selected color.

⑫ [Quick adding]
Add a privacy mask area and save it in the camera.

⑬ [Quick change]
Change a privacy mask area and save it in the camera.

⑭ [Delete]
Delete a privacy mask area saved in the camera.

⑮ [Image Stabilizer] M40
Show the usage condition of the image stabilizer. Set the image stabilizer under [Camera] in the Setting page (P. 5-10).

⑯ [Detailed Settings]
Show the detailed settings.

⑯-1 [Enable privacy mask] checkbox
Select the checkbox if you want to enable the selected privacy mask area settings.

⑯-2, ⑯-3 [Get camera info] M40
Load the camera angle. Load the pan, tilt, and zoom settings of the camera and show them in (⑯-2).

⑯-4 [Privacy Mask Position and Size]
Set left and upper edge, width, and height of the privacy mask.

⑯-5 [Preview settings]
The settings will be reflected in the image display area and in the registered privacy mask display area (capture area).

⑰ [Restore settings]
Clear the settings you have specified on the screen of the tool and restore the settings saved in the camera.

⑱ [Save settings]
Save the privacy mask settings specified under [Detailed Settings] in the camera.

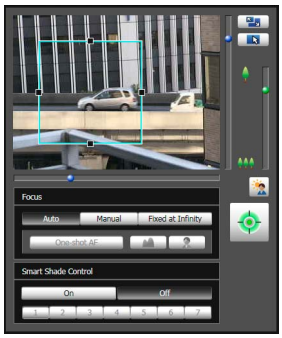
Setting the Privacy Mask Area

Set the privacy mask area while checking the image on the camera.

1 If you have not yet obtained the camera control privileges, click the [Obtain/release Camera Control] button and obtain the control privileges.

2 Set the position and size of the privacy mask area.

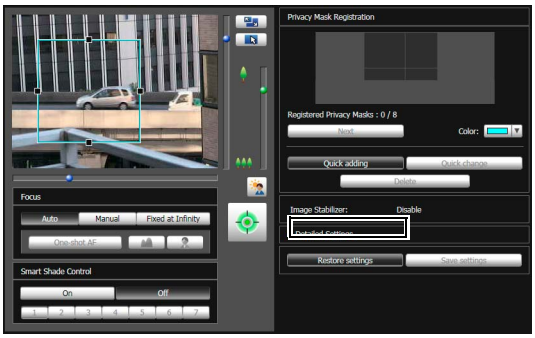
A preview frame showing the privacy mask area is shown in the image display area.



If you want to change the size, drag the square markers (■) positioned at the four sides of the preview frame. Drag from inside the frame to move the privacy mask area.
If you want to cancel the changes and restore the settings saved in the camera, click [Restore settings].

3 Click [Quick adding] to save the privacy mask area.

The set privacy mask area is saved in the camera.



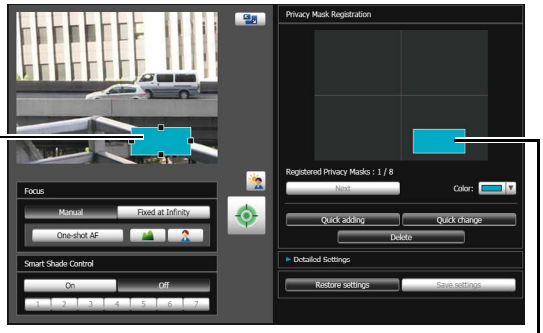
You can set up to eight privacy masks. Repeat the setting operations to set multiple privacy mask areas.

4 Confirm privacy mask areas.

Saved privacy mask areas are shown in the image display area and registered privacy mask display area (capture area).

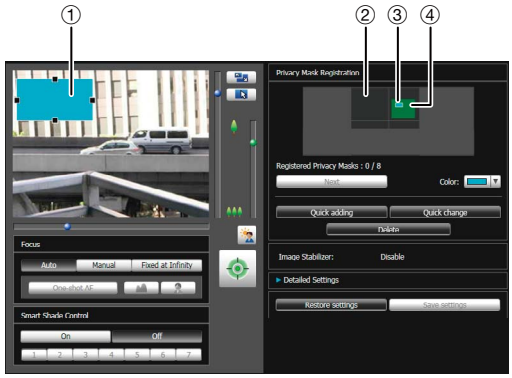
VB-M700F/VB-M600D/VB-M600VE

Image Display Area
Enabled privacy mask areas are shown filled with color. Disabled privacy mask areas are just shown in a frame.



Privacy Mask Area
Privacy masks for which the [Enable privacy mask] checkbox is selected are shown filled with color. Privacy masks that are not selected are shown in a hatched frame.

VB-M40



①Privacy Mask Area
Enabled privacy mask areas are shown filled with color. Disabled privacy mask areas are just shown in a frame.

②View Restriction Area
This is the area set with the View Restriction Setting Tool.

③Privacy Mask Area
Privacy masks for which the [Enable privacy mask] checkbox is selected are shown filled with color. Privacy masks that are not selected are shown in a hatched frame.

④Maximum Wide-angle Area
This is the visible area when the camera is at maximum wide angle. This area is only shown when a privacy mask area is being dragged.

Important

- Intelligent functions will not detect set privacy mask areas.
- Privacy masks are applied to all images transmitted from the camera (live video, uploaded images, recorded video).

M40

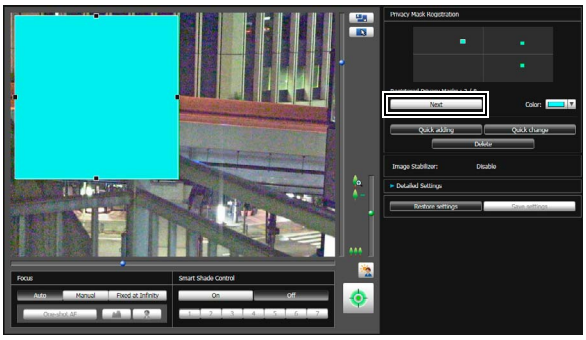
- Privacy mask areas cannot be set in digital zoom areas.
- Privacy masks set at a zoom position close to the tele end may deviate slightly from the specified position.
- Set the privacy mask area to a somewhat larger size than the area you want to hide. Also, be sure to confirm that after setting a privacy mask, the area you want to hide does not become visible when the camera direction is altered by pan, tilt, or zoom operations.
- If the privacy mask settings were changed after a panorama image was saved using the Panorama Creation Tool, the panorama image must be recreated using the Panorama Creation Tool.
- Reconfigure all privacy mask positions and sizes when reconfiguring privacy mask settings after the image stabilizer setting was changed.

Changing/Deleting a Privacy Mask Area

How to Change

1 Select the privacy mask area you want to change.

Click the privacy mask area you want to change in the registered privacy mask display area (capture area) or select a privacy mask area by clicking [Next].



2 Change the position and size of the privacy mask area.

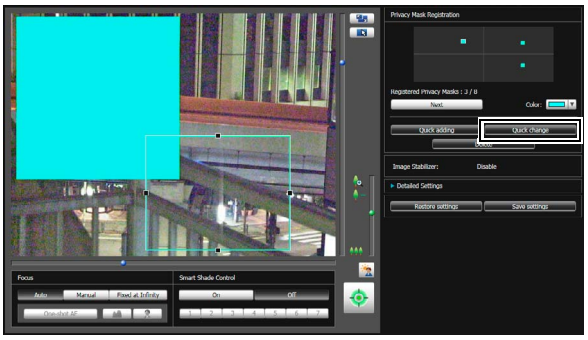
Privacy mask areas can be changed using the mouse or by entering values.

Entering values
Click [Detailed Settings].
Enter a value for the [Privacy Mask Position and Size] and click [Preview settings] to check the position and size of the preview frame.
M40
Click [Get camera info] to load the current pan, tilt, and zoom settings.

If you want to cancel the changes and restore the settings saved in the camera, click [Restore settings].

3 Click [Quick change] to save the privacy mask area.

The changed privacy mask area is saved in the camera.



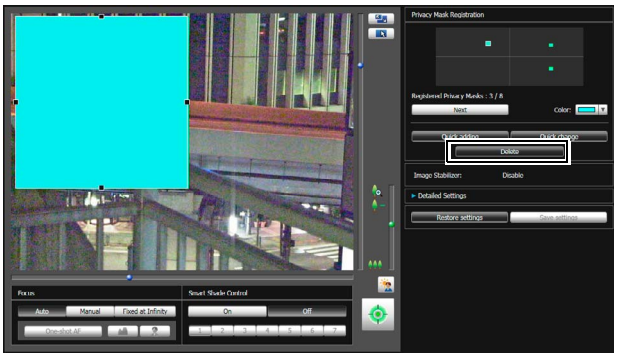
Note

Select a disabled privacy mask and click [Quick change] to enable it.

How to Delete

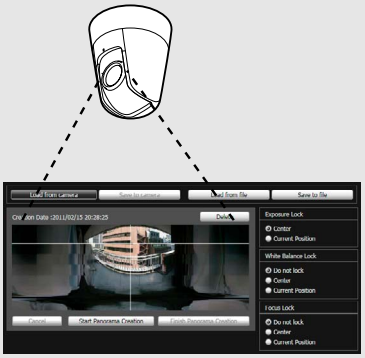
Select the privacy mask area you want to delete and click [Delete].

The privacy mask area that was saved in the camera is deleted.



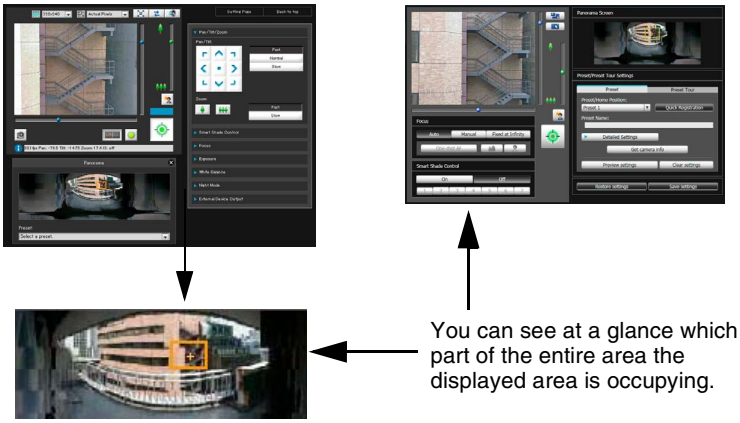
Panorama Creation Tool M40

A panorama image capture/creation tool that shows the entire area that can be captured by this camera. When performing pan, tilt, or zoom operations, setting presets using the viewer, etc., you can see at a glance which part of the entire area the set area is occupying.



Create/capture a panorama image with the Panorama Creation Tool and save it in the camera.

Admin Viewer **Preset Setting Tool**

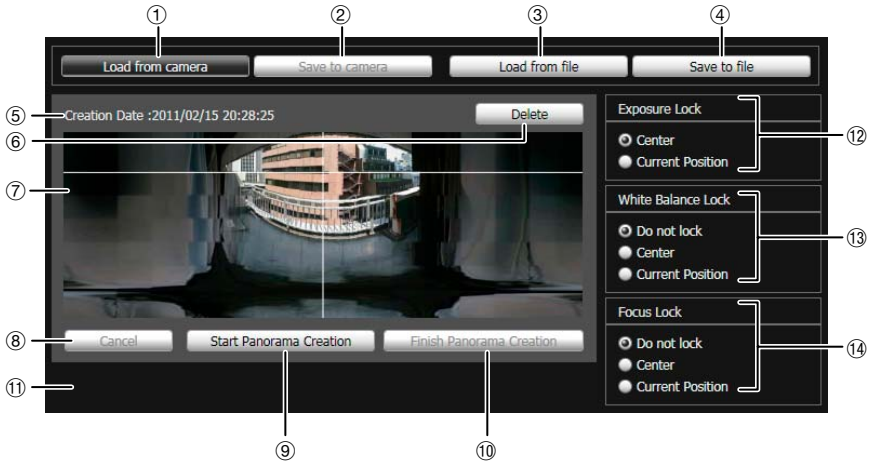


You can see at a glance which part of the entire area the displayed area is occupying.

Important

If the privacy mask settings were changed using the Privacy Mask Setting Tool, it is recommended that you recreate the panorama image to reflect the new privacy mask settings in the panorama image.

Display Screens of Panorama Creation Tool



① [Load from camera]
Show the panorama image saved in the camera.

② [Save to camera]
Save the currently shown panorama image in the camera.

③ [Load from file]
Show JPEG files as a panorama image.

④ [Save to file]
Save the currently shown panorama image as a JPEG file.

⑤ Creation date and time
Show the date and time a panorama image was captured or loaded from a JPEG file.

⑥ [Delete]
Delete the currently shown panorama image.

⑦ Panorama Image Display Area
Show the panorama image.

⑧ [Cancel]
Stop the capture of a panorama image.

⑨ [Start Panorama Creation]
Start capturing a panorama image.

⑩ [Finish Panorama Creation]
Confirm the captured panorama image.

⑪ Status Display
Show the panorama image capturing status, such as [Capturing image], etc.

⑫ [Exposure Lock]
Select [Center] or [Current Position] for the auto exposure lock position.

⑬ [White Balance Lock]
Set the white balance to [Do not lock], [Center], or [Current Position].

⑭ [Focus Lock]
Set the focus to [Do not lock], [Center], or [Current Position].

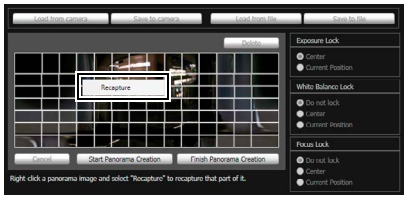
Capturing a Panorama Image

1 Click [Start Panorama Creation].

The capture is started.
Change the settings for [Exposure Lock], [White Balance Lock], and [Focus Lock] as necessary.

To stop the capture when underway, click [Cancel].

When you position the mouse pointer over the panorama image, a white grid is shown. If you want to recapture part of the panorama, position the pointer inside the grid, right-click and select [Recapture].



To recapture an entire panorama image, click [Start Panorama Creation] again.

Note

- While a panorama image is being captured, the image stabilizer function is temporarily disabled.
- While a panorama image is being created, the connection of anyone other than Administrators is cut off.
- When a small value is entered for [Maximum Frame Rate: Image Transmission] under [Video] > [JPEG] in the Setting page, panorama capture is slowed down.

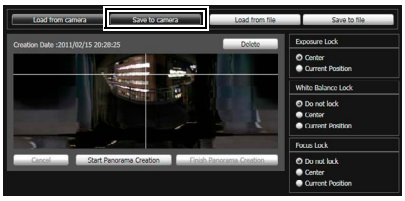
2 When the capture is complete, click [Finish Panorama Creation] if the image is satisfactory.

Saving/Deleting a Panorama Image

How to Save

Click [Save to camera], and then click [OK] in the displayed dialog box.

The panorama image is saved to the camera.



How to Delete

1 To delete the panorama image saved to the camera, click [Delete] and in the dialog that appears click [OK]. The image in the panorama image display area will be deleted.

2 Click [Save to camera].

The panorama image saved in the camera is deleted.

Opening a Panorama Image from Image Files/Saving as Image Files

You can open image files as a panorama image or save a captured panorama image as an image file. Only JPEG image files created using Panorama Creation Tool can be handled.

How to Open from Image Files

Click [Load from file] and then select the image files you want to use in the displayed dialog box.

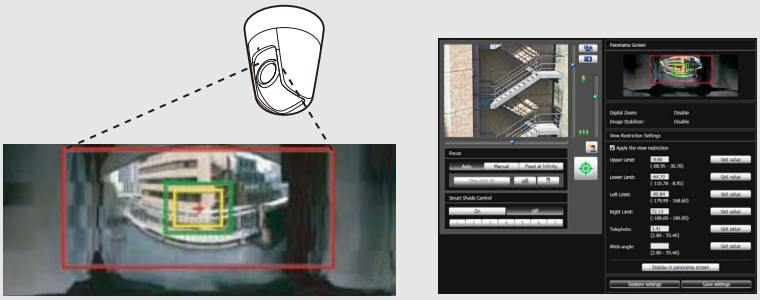
How to Save

Click [Save to file] and then select the folder you want to save the image file in and enter the file name in the displayed dialog box.

View Restriction Setting Tool

M40

View Restriction Setting Tool is a tool that limits the range that can be captured by the camera. If view restrictions have been set, you can limit the displayable capture range using the viewer.



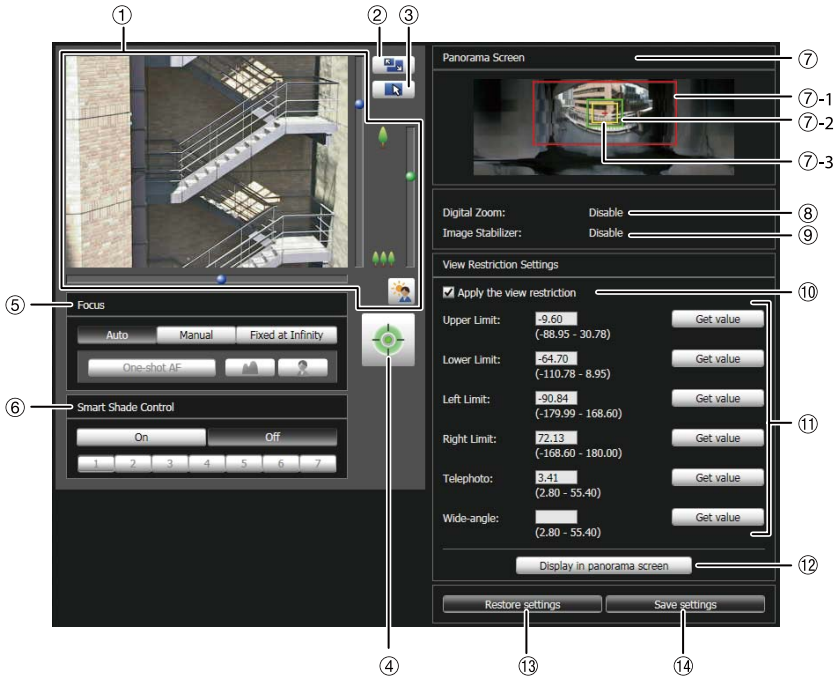
To limit zoom or a certain field of view when publishing live video, use the View Restriction Setting Tool to set the view restrictions easily.

[Apply View Restriction Setting]

Restrictions set by the View Restriction Setting Tool are applied in the following cases.

- When the Admin Viewer is accessed with authorized user authorities
- When the VB Viewer is accessed
- When accessed via RM-Lite

Display Screens of View Restriction Setting Tool



① Image Display Area
The image currently captured by the camera is shown. Pan, tilt, and zoom operations are the same as in the VB-M40 Viewer. For details, see “How to Operate the Viewer” (P. 7-5).

② [Switch Screen Size] button
Each time this button is clicked, the screen size of the image display area switches between “320 x 240” and “640 x 480”.

③ [Switch Mouse Operation] button
Click the button to switch to . In this mode, move the mouse pointer to the image display area and left-click to operate the pan and tilt. Click the button again to return to .

④ [Obtain/release Camera Control] button
This button is used to obtain/release the camera control privileges. For details, see “Obtaining Camera Control Privileges” (P. 7-7).

⑤ [Focus]
Focus can be operated if control privileges have been obtained. Focus operations are the same as in the Admin Viewer. For details, see “Setting the Focus” (P. 7-14).

⑥ [Smart Shade Control]
Smart shade control can be operated if control privileges have been obtained. Smart shade control operations are the same as in the Admin Viewer. For details, see “Setting the Smart Shade Control” (P. 7-14).

⑦ [Panorama Screen]
The panorama image registered in the camera is shown. View restriction preview frames, representing the view restriction setting values, are also shown. You can drag the frames to change their shapes, with the new settings being reflected in View Restriction Settings.

- View restriction preview frame
  ⑦-1 Pan/tilt preview frame (red frame)
  Range of field of view defined by top/ bottom/left/right edges
  ⑦-2 Wide-angle preview frame (green frame)
  Wide-angle restriction setting (restriction of capture frame)
  ⑦-3 Telephoto preview frame (yellow frame)
  Telephoto restriction setting (restriction of maximum zoom ratio)

⑧ [Digital Zoom]
The current digital zoom usage status of the camera is shown in real time.

⑨ [Image Stabilizer]
The current image stabilizer usage status of the camera is shown in real time.

⑩ [Apply the view restriction]
To use view restrictions, select this checkbox.

⑪ View restriction setting entry boxes and [Get value]
You can enter a value in each view restriction setting entry box to change the applicable setting. You can load the values for the current camera angle to the view restriction settings by clicking [Get value].

- View restriction settings
  [Upper Limit]: Top limit of the view restriction. Click [Get value] to load the top edge value of the current camera angle.
  [Lower Limit]: Bottom limit of the view restriction. Click [Get value] to load the bottom edge value of the current camera angle.
  [Left Limit]: Left limit of the view restriction. Click [Get value] to load the left edge value of the current camera angle.
  [Right Limit]: Right limit of the view restriction. Click [Get value] to load the right edge value of the current camera angle.
  [Telephoto]: Telephoto limit of the view restriction. Click [Get value] to load the zoom ratio of the current camera angle.
  [Wide-angle]: Wide-angle limit of the view restriction. Click [Get value] to load the zoom ratio of the current camera angle.

⑫ [Display in panorama screen]
Apply the current view restriction settings to the panorama screen. At this point, the settings are not yet saved in the camera. Be sure to click [Save settings].

⑬ [Restore settings]
Clear the settings you have specified on the screen of the tool and restore the settings saved in the camera.

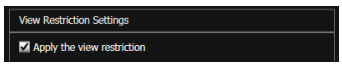
⑭ [Save settings]
Save the set view restriction in the camera.
After the view restriction has been set, be sure to save the settings in the camera by clicking [Save settings].

Setting View Restrictions

You can set view restrictions by entering values in the view restriction setting entry boxes, or by changing the current settings in the view restriction preview frame of the panorama screen or from the camera angle in the image display area. Select appropriate settings according to the environment in which the camera is operated or the purpose for which it is used.

■ Use the preview frame on the panorama image to set view restrictions.

1 Select the [Apply the view restriction] checkbox.



2 Drag to change the [Pan/tilt preview frame (red frame)], [Telephoto preview frame (yellow frame)], or [Wide-angle preview frame (green frame)] shown on the panorama screen to set view restrictions.

When the telephoto/wide-angle preview frames are enlarged/shrunk, the aspect ratio remains the same. At this time, you can also enter view restrictions by entering values in the view restriction setting entry boxes. If you have adjusted the view restriction settings, click [Display in panorama screen]. The settings are reflected in the preview frame of the panorama screen.

3 Click [Save settings].

Confirm that the settings have been applied correctly, and then click [Save settings] to save the settings in the camera.

■ Setting by Loading Position Information from Image in Image Display Area

1 Select the [Apply the view restriction] checkbox.

2 Click the [Obtain/release Camera Control] button to obtain the control privileges of the camera.

3 Operate the camera to adjust the top edge, bottom edge, left edge, right edge, telephoto, or wide angle to desired positions, and click [Get value] each time.

The loaded view restriction can be checked in the view restriction setting entry box or view restriction preview frame.

Upper Limit: -9.60 (-88.95 - 30.78) Get value
Lower Limit: -64.70 (-110.78 - 8.95) Get value
Left Limit: -90.84 (-179.99 - 168.60) Get value
Right Limit: 72.13 (-168.60 - 180.00) Get value
Telephoto: 3.41 (2.80 - 55.40) Get value
Wide-angle: (2.80 - 55.40) Get value

4 Click [Save settings].

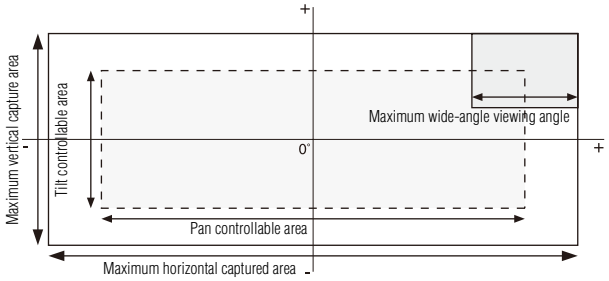
The settings are saved in the camera.

Important

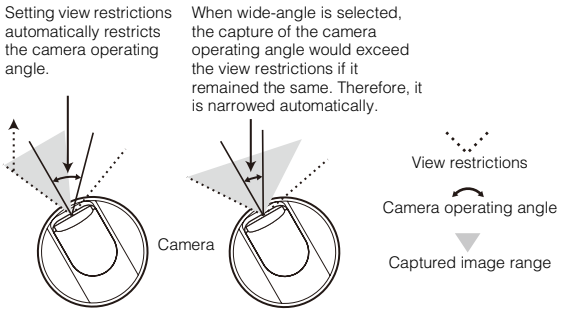
- If you have changed the camera mounting method, recapture the panorama image and register it again.
- The panorama screen may be slightly different from the actual image. After view restrictions have been set, be sure to confirm with the VB Viewer that the view restrictions have been reflected correctly.
- Confirm the settings using the VB Viewer. (View restrictions are not applied to the image display area of this tool, nor to the Admin Viewer.)
- If the image stabilizer or digital zoom setting has been changed, check the view restriction settings again.

Note

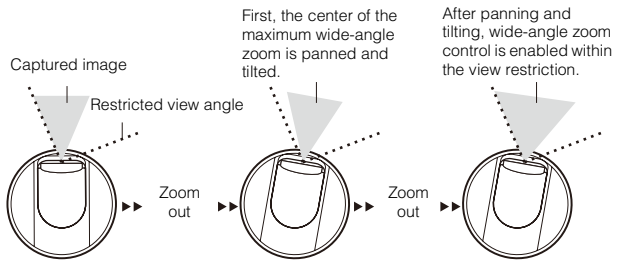
- Even when view restrictions are set, an area outside the view restriction may still appear momentarily when the camera is controlled near the boundary of the view restriction.
- To cancel the view restrictions, clear the [Apply the view restriction] checkbox and then click [Save settings].
- If the setting fields are cleared while the [Apply the view restriction] checkbox is selected, the maximum view restriction will be set.
- The controllable range and range that can be captured are as follows.



- The pan and tilt ranges vary depending on the zoom ratio (view angle).


Setting view restrictions automatically restricts the camera operating angle.
When wide-angle is selected, the capture of the camera operating angle would exceed the view restrictions if it remained the same. Therefore, it is narrowed automatically.
Camera
View restrictions
Camera operating angle
Captured image range

- If the view restriction will be exceeded as a result of controlling the zoom toward the wide-angle side, the camera will first pan and tilt to a position where the maximum wide-angle zoom will be within the viewing restriction area. Wide-angle zoom control will then be enabled within the view restriction area.

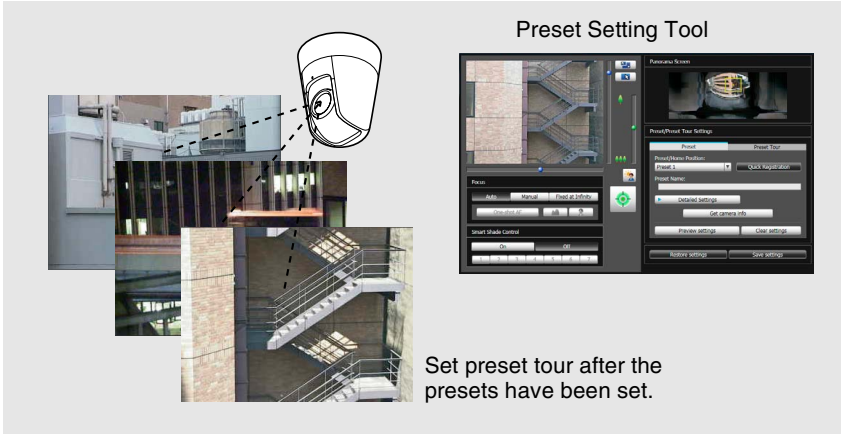

Captured image
Restricted view angle
First, the center of the maximum wide-angle zoom is panned and tilted.
After panning and tilting, wide-angle zoom control is enabled within the view restriction.
Zoom out
Zoom out

- Reducing the view restriction may also reduce the zoom range.

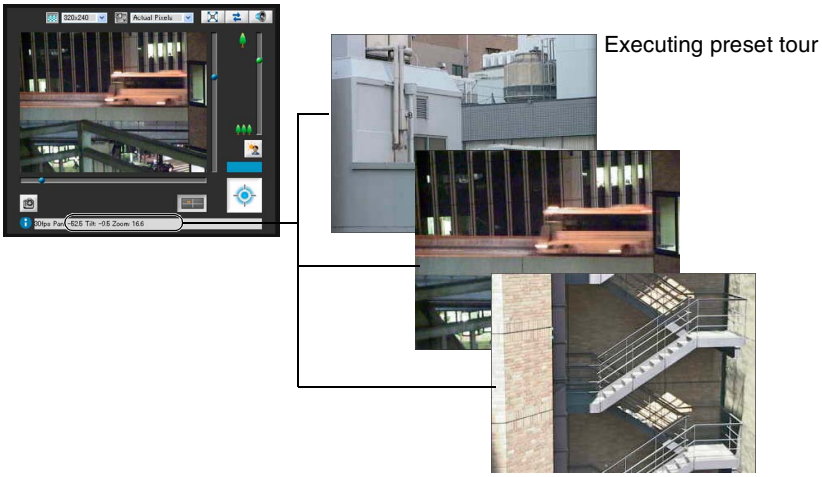
Preset Setting Tool

M40

A tool that lets you set presets and the home position. You can make the desired settings with the mouse by referring to the preview in the panorama mode. You can also set Preset Tour whereby the camera tours and monitors multiple presets.



Reflecting in the viewer



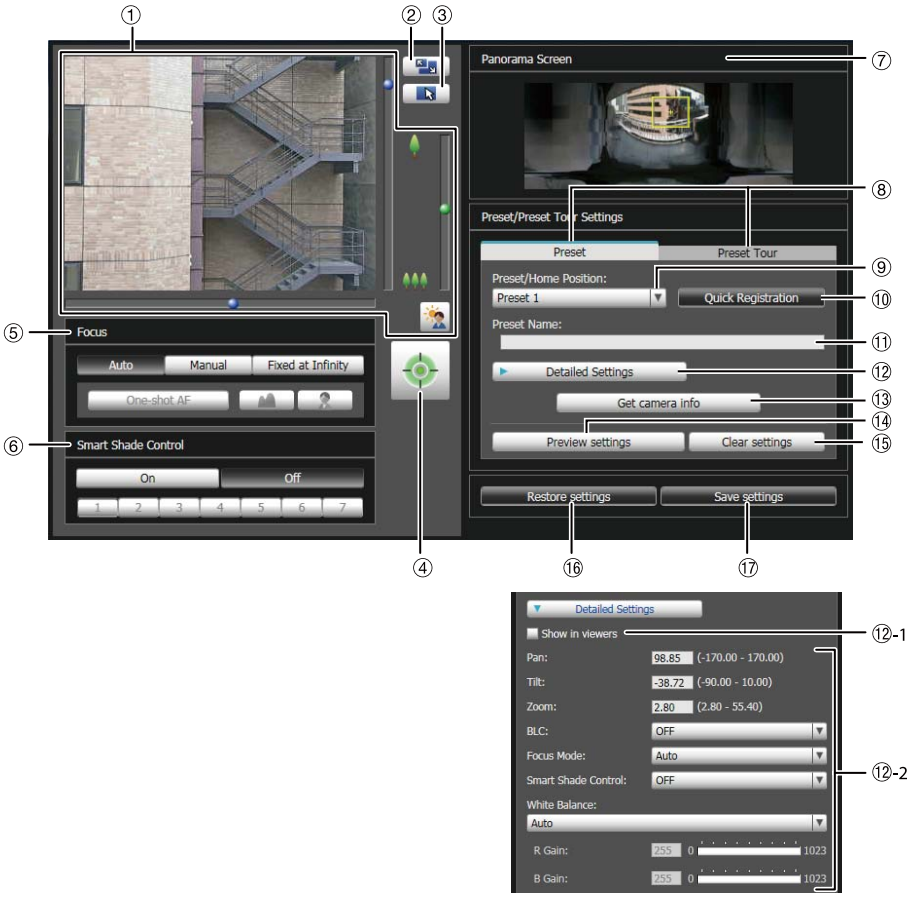
Important

If you want to use intelligent functions, it is strongly recommended that you use the Preset Setting Tool to register a preset that corresponds to the camera position of the area where you want to use intelligent functions.

Display Screens of Preset Setting Tool

Preset Setting Tool has two display screens, the [Preset] tab and the [Preset Tour] tab.
With the [Preset] tab, up to 20 presets and the home position are set while referring to the panorama screen.
With the [Preset Tour] tab, Preset Tour is set whereby the camera tours and monitors multiple presets.
The following explains the [Preset] tab display screen.
For the [Preset Tour] tab, see “Preset Tour” (P. 6-20).

■ [Preset] Tab Display Screen



① Image Display Area
The image currently captured by the camera is shown. Pan, tilt, and zoom operations are the same as in the VB-M40 Viewer. For details, see “How to Operate the Viewer” (P. 7-5).

② [Switch Screen Size] button
Each time this button is clicked, the screen size of the image display area switches between “320 x 240” and “640 x 480”.

③ [Switch Mouse Operation] button
Click the button to switch to . In this mode, move the mouse pointer to the image display area and left-click to operate the pan and tilt. Click the button again to return to .

④ [Obtain/release Camera Control] button
This button is used to obtain/release the camera control privileges. For details, see “Obtaining Camera Control Privileges” (P. 7-7).

⑤ [Focus]
Focus can be operated if control privileges have been obtained. Focus operations are the same as in the Admin Viewer. For details, see “Setting the Focus” (P. 7-14).

⑥ [Smart Shade Control]
Smart shade control can be operated if control privileges have been obtained. Smart shade control operations are the same as in the Admin Viewer. For details, see “Setting the Smart Shade Control” (P. 7-14).

⑦ [Panorama Screen]
The panorama image registered in the camera is shown. A preset preview frame (yellow) reflecting the preset settings is shown, where you can drag to resize or move the frame and reflect the new frame in the preset settings. Also, if view restrictions are set, those areas are shown in a blue frame.

⑧ [Preset] tab, [Preset Tour] tab
Switch between the preset setting tab and preset tour setting tab.

⑨ [Preset/Home Position] selection box
Select the preset (from 1 to 20) or [home position] you want to set.

⑩ [Quick Registration]
Load the current camera position, and register them as preset settings.

⑪ [Preset Name]
You can enter a preset name of up to 64 characters. You can set a name in alphanumeric characters. Be sure to enter a single-byte alphanumeric preset name. When the [Home Position] is selected in ⑨, the preset name function is grayed out.
In a [Preset Name], ASCII characters (spaces or printable characters) can be used.

⑫ [Detailed Settings]
Show the detailed settings.

⑫-1 [Show in viewers] checkbox
Select this checkbox to use presets in the viewer. When the [Home Position] is selected in ⑨, this function is grayed out.

⑫-2 Camera Parameter
Enter the center angle of the desired angle in [Pan] and [Tilt]. In [Zoom], enter the view angle.

- Camera Angle
  [Pan] .....Set the pan position of the camera.
  [Tilt] .....Set the tilt position of the camera.
  [Zoom] ..Set the viewing angle of the camera.
- [BLC] (Back Light Compensation)
  Select [OFF] or [ON] for the BLC setting of the camera.
- [Focus Mode]
  Select [Auto], [Manual], or [Fixed at infinity] for the focus mode of the camera. (P. 7-14)
- [Smart Shade Control]
  Select [OFF] or a level from [1] (weak) to [7] (strong) for the smart shade control setting of the camera.
- [White Balance]
  Set the white balance of the camera to [Auto] or according to the light source of the condition in which it is used. For details on light sources, see P. 5-10.
- [R Gain], [B Gain]
  If white balance is set to [Manual], set the respective gains to a value between 0 and 1023.

⑬ [Get camera info]
Load the current camera angle, the ⑤ [Focus] settings, or ⑥ [Smart Shade Control] settings of the image display area, and reflect them in the panorama screen or camera parameter settings.

⑭ [Preview settings]
Use the camera parameter values that are being edited to adjust the camera angle, ⑤ [Focus], or ⑥ [Smart Shade Control], and preview them in the image display area.

⑮ [Clear settings]
Delete the settings for the preset selected.

⑯ [Restore settings]
Clear the settings you have specified on the screen of the tool and restore the settings saved in the camera.

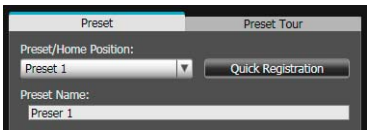
⑰ [Save settings]
Save the edited preset settings in the camera.
If presets have been set, be sure to save the settings by clicking [Save settings].

Setting the Preset

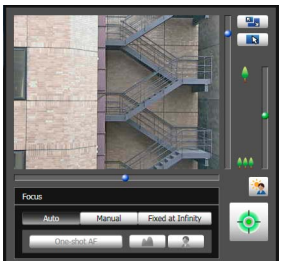
A preset can be set in one of the following two ways.

■ Setting from Camera Angle in the Image Display Area

1 Select the preset you want to set from the [Preset/Home Position] selection box, and then fill the [Preset Name] field.



2 Click the [Obtain/release Camera Control] button to obtain the control privileges of the camera.



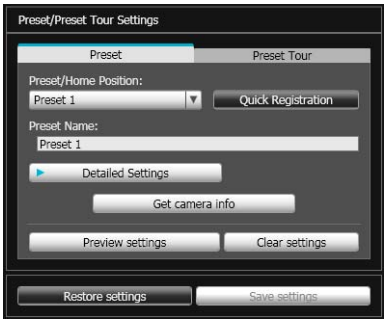
3 Operate the camera from the image display area, set it to the desired position and click [Quick Registration].

■ Use the preview frame of the panorama screen to set presets

Use the preview frame of the panorama screen to set presets.

1 Select the preset you want to set from the [Preset/Home Position] selection box, and then fill the [Preset Name] field.

Be sure to enter the preset name.

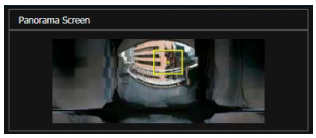


2 Drag to move or resize the preset preview frame shown on the panorama image to set the preset.

If you click on the panorama image, the preview frame will move to center on the clicked point.

3 Click [Preview settings].

The settings are reflected in the preview frame on the panorama screen and the image display area.



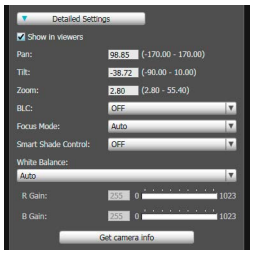
If you previewed incorrect settings, etc., and want to restore the settings registered in the camera, click [Restore settings].

4 Click [Save settings].

■ Specifying Detailed Settings

If you want to fine-tune the camera angle or to adjust the image, etc., click [Detailed Settings] and specify the detailed settings before saving the preset settings in the camera.

1 Select the [Show in viewers] checkbox.



2 Click [Get camera info].

The camera parameters in the image display area are loaded to [Detailed Settings].

3 Fine-tune the camera angle and adjust the image quality with focus or smart shade control while checking the image.

4 Click [Preview settings].

The settings are reflected in the preview frame on the panorama screen and the image display area.
If you previewed incorrect settings, etc., and want to restore the settings registered in the camera, click [Restore settings].

5 Click [Quick Registration].

Important

- To use presets in the viewer, select the [Show in viewers] checkbox.
- To apply the manual focus mode, manually adjust the focus while checking the actual image in the image display area. After the focus has been adjusted, set the focus using [Get camera info]. Click [Save settings] to save the focus settings.
- If the image stabilizer setting is changed after a preset has been set, the viewing angle during operation will no longer agree with the viewing angle at the time the preset was set (P. 5-11). Check the preset settings again if the image stabilizer setting is changed.
- If a dome housing is used, be sure to set presets with the dome installed.
- Set presets again if the camera mounting conditions have been changed.

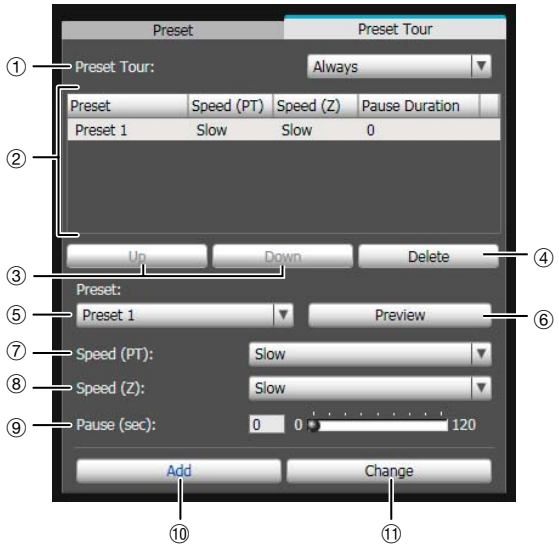
Note

- Up to 20 presets can be set.
- Changes to preset settings are not reflected in already connected viewers.
- You can disable presets in the viewer by clearing the [Show in viewers] checkbox under [Detailed settings].
- Preset positions cannot be set in the digital zoom area.

Preset Tour

Set a preset tour whereby the camera tours and monitors the multiple presets currently set.

■ [Preset Tour] Tab Display Screen



① [Preset Tour] selection box.
Select when you want to perform a preset tour from the following options.

[Not used]
Preset tour is not performed.

[For Viewers]
Preset tour is performed when a camera is connected via the VB Viewer, etc.

[Always]
Preset tour is always performed.

② Tour schedule list
A list of presets set for preset tour.

③ [Up] / [Down]
Select preset in the list and click [Up] or [Down] to change sequence of the tour schedule list. Presets tours are performed in order from the top of the list.

④ [Delete]
Delete the preset selected from the tour schedule list.

⑤ [Preset] selection box
Select the preset you want to add to the tour schedule list.

⑥ [Preview]
The camera angle switches to the selected preset, and the new angle can be checked in the image display area.

⑦ [Speed (PT)]
Select [Slow], [Normal], or [Fast] for the moving speed of the camera during panning/tilting.

⑧ [Speed (Z)]
Select [Slow] or [Fast] for the camera speed during zoom.

⑨ [Pause (sec)]
Set the time at which the camera stops at the preset position between 0 and 120 seconds in 5-second units.

⑩ [Add]
Add the preset to the tour schedule list.

⑪ [Change]
Change the speed or pause time between presets selected from the tour schedule list.

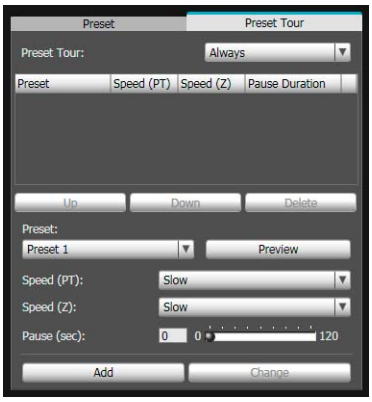
Note

- Preset tour is not performed while the camera is being controlled with viewers, Admin Tools, etc.
- Preset tour is not performed when control privileges are obtained by RM-Lite.

■ Setting the Preset Tour

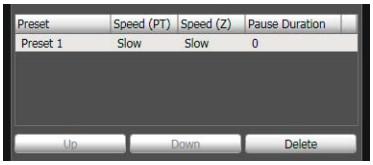
1 Select the touring method from the [Preset Tour] selection box.

Select [For Viewers] or [Always].

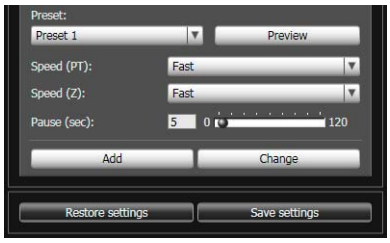


2 Select the preset number you want to add to the tour schedule from the [Preset] selection box, and then click [Add].

The preset is registered in the tour schedule list. Up to 20 presets can be registered.



3 Select a preset in the tour schedule list and set the pan, tilt, and zoom speeds using [Speed (PT)], [Speed (Z)], and [Pause (sec)], as well as the time in seconds during which the camera remains stationary at the preset position. Then, click [Change].



When [Preview] is clicked, the camera angle switches to this preset, and the new angle can be checked in the image display area.

When you want to delete changes made to the tour schedule list and restore the settings registered in the camera, click [Restore settings].

4 Click [Save settings].

When you complete setting the tour schedule list, click [Save settings]. The settings are saved in the camera.

Important

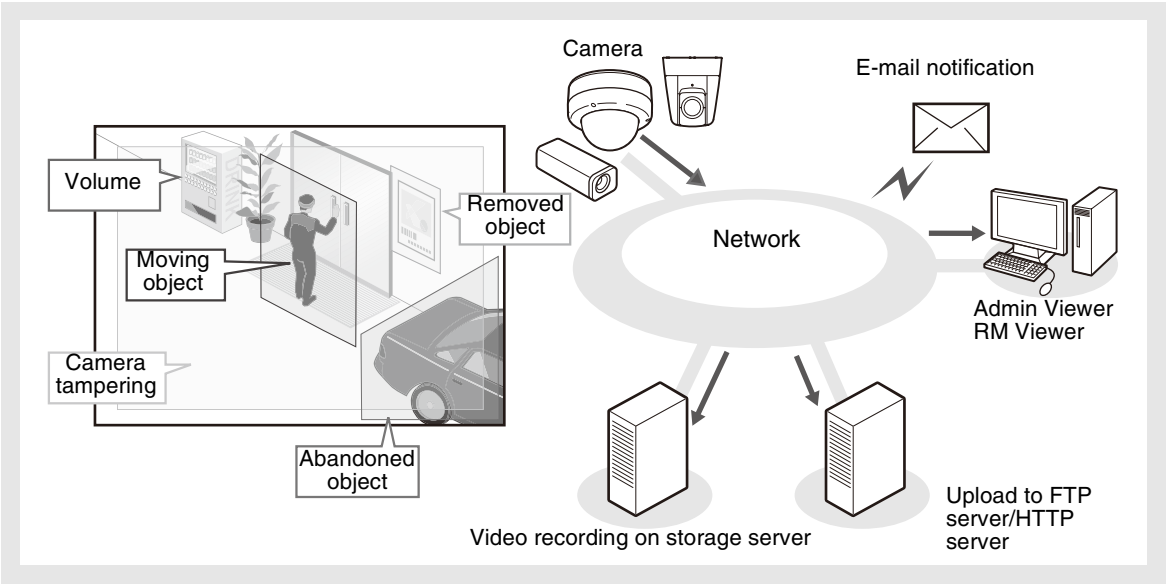
If preset tour is used, do not use the intelligent function. Also note that when [Auto] is set under [Day/Night], the pause time may lengthen as counting starts only after the pan, tilt, and zoom are in focus.

Note

The home position cannot be added to the tour schedule list.

Intelligent Function Setting Tool

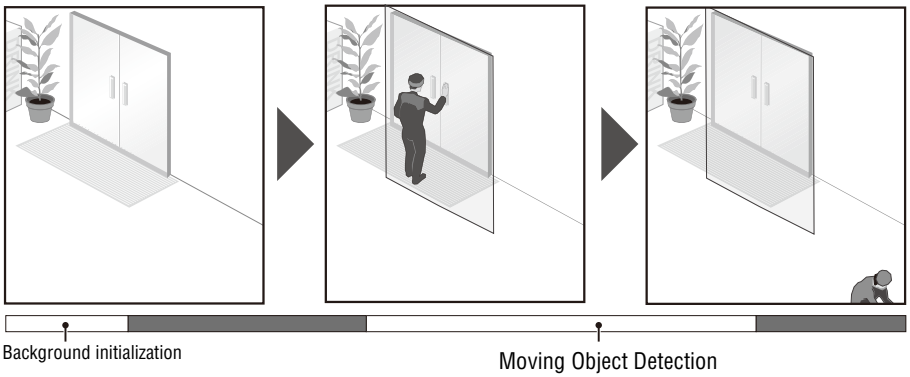
This tool is used to set intelligent functions that perform uploads, notify the viewer, audio playback, etc., if a change has occurred in the captured image due to movement of a subject.



The intelligent functions can perform the following 5 types of detection. Use detection types that best serve your needs.

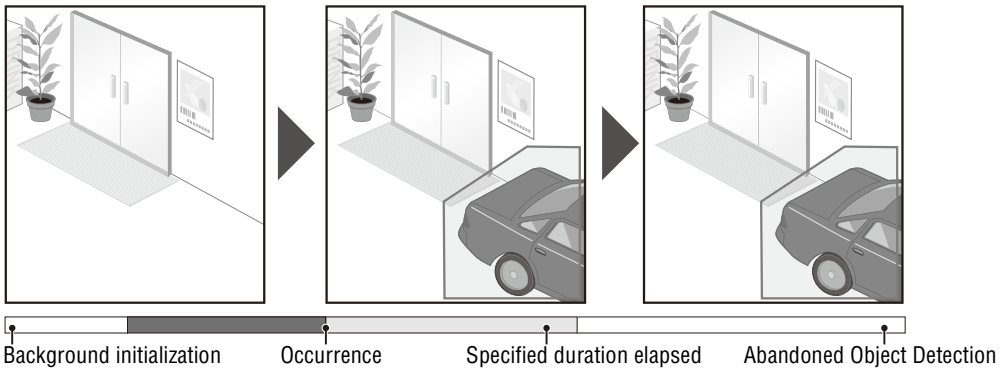
Moving Object Detection

Detect moving objects. This function can be used to detect visitors or suspicious individuals. Moving object detection is triggered when moving objects are inside the detection area.



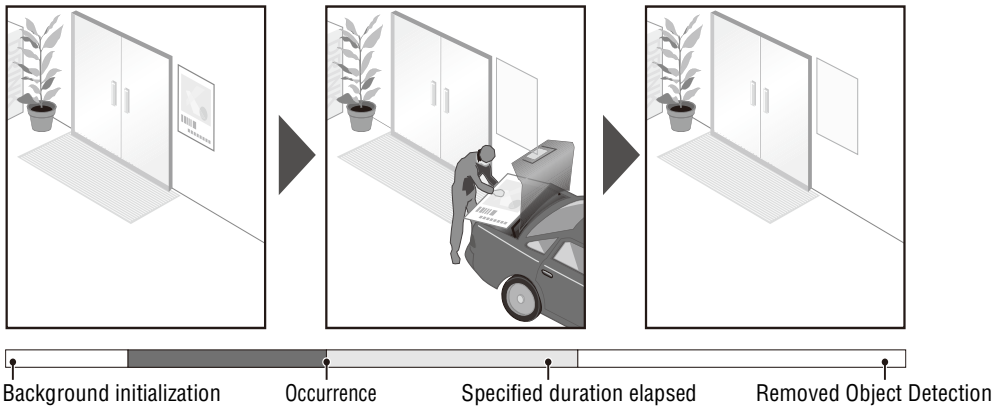
Abandoned Object Detection

Detect objects that are carried in and abandoned for a certain amount of time. This function can be used to detect objects that have been left.
Abandoned object detection is triggered when an object is left in the detection area for a specified duration.



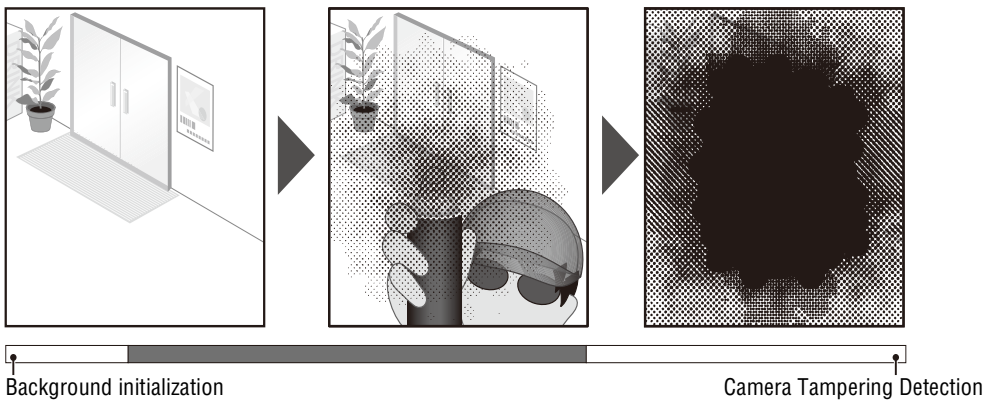
Removed Object Detection

Detect objects that are being removed. This function can be used to detect actions such as taking away valuables.
Removed object detection is triggered when an object is removed from the detection area for a specified duration.



Camera Tampering Detection

Detect when the capture is being obstructed. This function can be used to detect when the camera orientation is changed or the image display is obstructed with spray, etc.
Camera tampering detection is triggered when an area exceeding the set area is continuously altered by an object, etc.

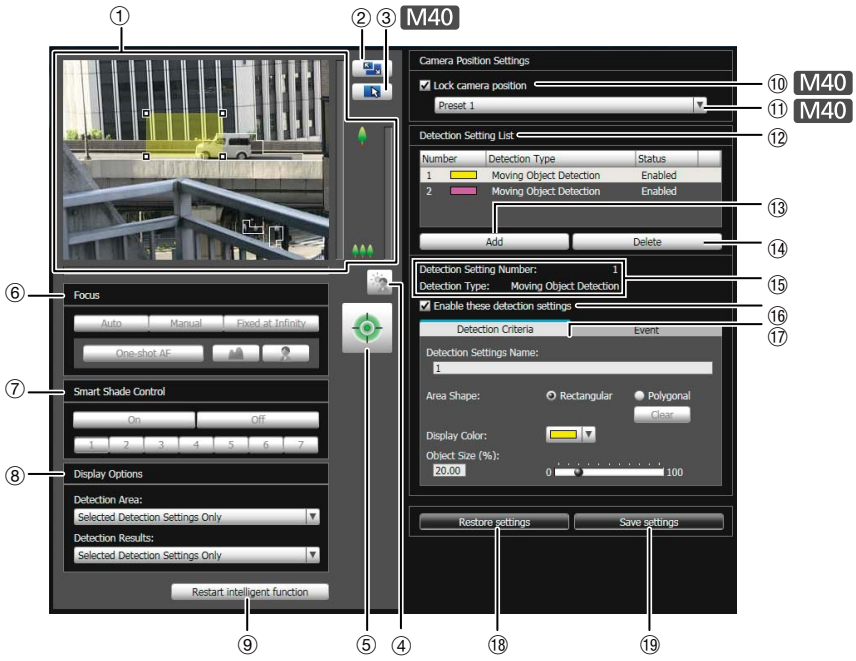


Volume Detection

Detect specified volume levels. For setting details, see “Chapter 5 Setting Page” [Event] > [Volume Detection] (P. 5-20).

Caution
Notes on Use of This Camera The intelligent functions are not suitable for applications where high reliability is required. If constant and maximum reliability is required for surveillance it is not recommended that you use this function. Canon shall assume no liability for any accident, loss or other undesirable outcomes resulting from intelligent function operations.

Display Screen of Intelligent Function Setting Tool



① Image Display Area

The image currently captured by the camera is shown. Detection areas are shown in translucently colored frames (rectangular or polygonal). Drag to resize the frames. Also, subjects for which movement has been detected are shown with a contour line.

M40

Pan, tilt, and zoom operations are the same as in the VB-M40 Viewer. For details, see “How to Operate the Viewer” (P. 7-5).

However, when the ⑩ [Lock camera position] checkbox is selected, the camera is fixed at a preset position and cannot perform pan, tilt, and zoom operations.

② [Switch Screen Size] button

Each time this button is clicked, the screen size of the image display area switches between “320 x 240” and “640 x 480.”

③ [Switch Mouse Operation] button M40

Each time this button is clicked, the screen switches between and , and the mouse operation in the image display area changes.

When the button is set to , detection areas can be created/resized/moved.

While in this mode, the camera orientation will not change.

When the button is set to and the ⑩ [Lock camera position] checkbox is not selected, pan, tilt, and zoom operations can be performed.

④ [BLC] button

This button turns on/off backlight compensation. This control is effective when the image is dark due to backlight.

⑤ [Obtain/release Camera Control] button

This button is used to obtain/release the camera control privileges. For details, see “Obtaining Camera Control Privileges” (P. 7-7). If camera control privileges have not yet been obtained elsewhere, such as in the Admin Viewer, the control privileges will be obtained the moment the Intelligent Function Setting Tool is launched.

⑥ [Focus]

Focus can be operated if the control privileges have been obtained. Focus operations are the same as in the Admin Viewer. For details, see “Setting the Focus” (P. 7-14).

M40
If the [Lock camera position] checkbox is selected, focus cannot be operated.

⑦ [Smart Shade Control]
Smart shade control can be operated if the control privileges have been obtained. Smart shade control operations are the same as in the Admin Viewer. For details, see "Setting the Smart Shade Control" (P. 7-14).
M40
If the [Lock camera position] checkbox is selected, smart shade control cannot be operated.

⑧ [Display Options]
Select the [Detection Area] or [Detection Results] you want to show in the image display area from the following items.

- [Selected Detection Settings Only]
  Show the detection areas or detection results only for those detection settings selected in the detection setting list.
- [All Detection Settings]
  Show the detection areas or detection results for all detection settings in the detection setting list.
- [Detection Settings of the Same Type]
  Show the detection areas or detection results for the same type of detection settings as those selected in the detection setting list.
- [Do not display]
  No detection areas or detection results are shown.

⑨ [Restart intelligent function]
If the background image has changed while you were specifying settings or detection results are not as set, etc., click this button to restart the intelligent function.

Important
It takes tens of seconds for the intelligent function to restart. No detection is performed while restarting.

⑩ [Lock camera position] checkbox M40
Select this checkbox to move the camera position to a preset position selected from the preset selection box and lock it there. Lock the camera position when specifying detection settings to obtain a correct detection result.
If camera control privileges are not obtained, this function is grayed out.

⑪ Camera position selection box M40
Select the camera position from the view restriction presets or the home position. Use the Preset Setting Tool to set presets or the home position (P. 6-16).

⑫ [Detection Setting List]
A list with the specified detection settings is shown.

⑬ [Add]
The [New Detection Settings] dialog box is shown and detection settings can be added.

⑭ [Delete]
Delete detection settings selected from the detection setting list.

⑮ [Detection Setting Number], [Detection Type]
The detection setting numbers and detection types selected from the [Detection Setting List] are shown.

⑯ [Enable these detection settings] checkbox
Select this checkbox to enable the detection settings that are selected in the detection setting list.

⑰ [Detection Criteria] tab, [Event] tab
Switch between the Detection Criteria and Event tabs.

- [Detection Criteria]
  Specify detection settings name, detection area, and detection criteria (P. 6-27).
- [Event]
  Specify operations to be performed when events occur (P. 6-28).

⑱ [Restore settings]
Clear the settings you have specified on the screen of the tool and restore the settings saved in the camera.

⑲ [Save settings]
Save the edited detection settings in the camera. After the detection settings have been specified, be sure to save the settings in the camera by clicking [Save settings].

Flow of Intelligent Function Setting

The intelligent functions are set according to the procedure below. For details on the setting method, see each setting page.

■ Camera Position Settings M40

1 Register the camera angle as a preset using the Preset Setting Tool.

For details on the preset setting method, see “Preset Setting Tool” (P. 6-16).

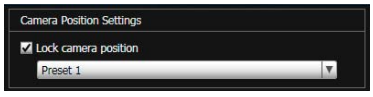
Important

It is strongly recommended that you preset the camera angle in advance and lock the camera at a preset position with the Intelligent Function Setting Tool. An angle of view that captures the target object up close is also recommended.

2 Launch the Intelligent Function Setting Tool.

3 Set the camera position.

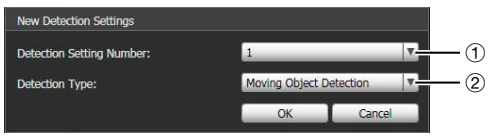
Obtain camera control privileges and select [Lock camera position] before selecting a preset.
Set presets in advance using Preset Setting Tool (P. 6-16).



■ Intelligent Function Settings

1 Add detection settings.

When you click [Add] in the [Detection Setting List], the [New Detection Settings] dialog box is displayed. Set the [Detection Setting Number] and [Detection Type] of the detection setting you want to add, and then click [OK].
Up to 15 different detection settings can be registered.

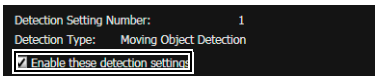


① [Detection Setting Number]
Specify a detection setting number from 1 to 15 for the detection area you want to set.

② [Detection Type]
Select detection types that suit your purpose from [Moving Object Detection], [Abandoned Object Detection], [Removed Object Detection], or [Camera Tampering Detection]. For details on detection types, see P. 6-22.

2 Enable Detection Settings.

To enable detection settings, select [Enable these detection settings].
Clear this checkbox to disable a setting.



3 Set detection criteria ([Detection Criteria] tab P. 6-27).

Set detection criteria while operating the camera and checking the image in the image display area.

4 Set operations to be performed when a change in a subject is detected ([Event] tab P. 6-28).

Set e-mail notification, upload, and audio playback to be performed upon detection.

5 Save the detection settings in the camera.

Click [Save settings] to save the settings in the camera.

6 Check the detection result.

You can check the detection status of the specified detection settings in the event display panel of the Admin Viewer (P. 7-17).

Important

Notes on intelligent function settings and operation

- When setting intelligent function, do an actual detection test to confirm that detection will be performed correctly.
- When the brightness of the entire screen suddenly changes, the detection may be delayed for up to 5 minutes.
- If [Auto] is used in [Day/Night] settings, and automatic switching between [Day Mode] and [Night Mode] is performed, [Restarting intelligent function. Please wait.] is shown and intelligent function will restart. Detection will not be performed while intelligent function is restarting.
- Do not set detection areas in the On-screen Display area.
- Movements of subjects are not detected in privacy mask areas.

M40

- If the camera is operated during intelligent function setting or operation, [Restarting intelligent function. Please wait.] is shown and intelligent function will restart. Detection will not be performed while intelligent function is restarting.
- Set intelligent function again if the angle of view is changed through camera operation, or the camera position of a preset or home position is changed using Preset Setting Tool.

Difficult-to-detect Subjects

- Objects or portions where there is little contrast in color or brightness with the background may not be detected.
- Small objects and changes on the screen may not be detected.
- Partial or entire changes in light on the screen may trigger detection.
- If multiple objects overlap, the detection status may change.

Setting Intelligent Function Detection Settings

■ Setting Detection Criteria ([Detection Criteria] tab)

Set detection criteria while operating the camera and checking the image in the image display area.

[Detection Criteria] tab

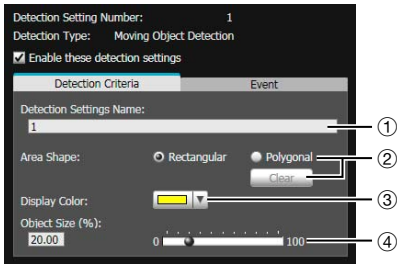
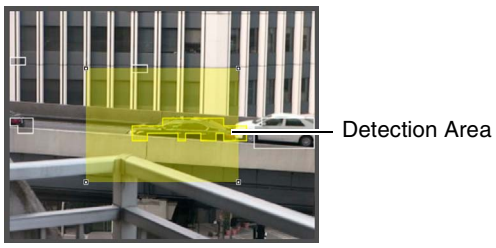


Image Display Area



① [Detection Settings Name]
You can use up to 64 characters in a detection setting name. Be sure to enter a single-byte alphanumeric detection setting name.
In a [Detection Settings Name], ASCII characters (spaces or printable characters) can be used.

② [Area Shape]
Select [Rectangular] or [Polygonal] for the shape of detection areas you want to set in the image display area.
For details on detection area setting operations, see “Setting Detection Criteria per Detection Type” (P. 6-29).

[Clear]
If the [Area Shape] is [Polygonal], the detection area set in the image display area is deleted.

③ [Display Color]
Choose the color of the detection setting. The color selected here becomes the display color of the detection area in the image display area.

④ [Object Size (%)] [Change Ratio (%)] [Duration (Sec)]
Set the lower limit for the size, change ratio, and judgment time for the set detection area to trigger detection. If the value set here is exceeded, “Detected” mode is triggered.
Click the text box to enter a value directly, or specify a value using the slider.
For details on the setting method, see “Setting Detection Criteria per Detection Type” (P. 6-29).

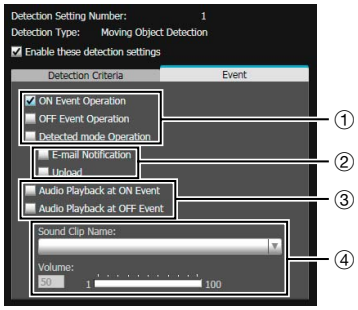
Important

- It is recommended that the detection criteria are set in a condition as close as possible to the condition in which the camera is actually used.

■ Setting Event Operations ([Event] tab)

Set operations to be performed upon detection of changes in a subject.

[Event] tab



① Specify the operation timing. (Multiple checkboxes can be selected.)

[ON Event Operation] checkbox
When selected, the operations set in ② [E-mail Notification] and [Upload] are performed the moment detected mode is triggered to ON.

[OFF Event Operation] checkbox
When selected, the operations set in ② [E-mail Notification] and [Upload] are performed the moment detected mode is triggered to OFF.

[Detected mode Operation] checkbox
When selected, the operations set in ② [E-mail Notification] and [Upload] are performed for as long as detected mode is active.

② Specify the event operation. (Multiple checkboxes can be selected.)

[E-mail Notification] checkbox
When selected, e-mail notification is performed at the timing set in ①. [E-mail Notification] must be set in advance under [Upload] in the Setting page (P. 5-17).

[Upload] checkbox
When selected, upload is performed at the timing set in ①. General upload must be set in advance under [Upload] in the Setting page (P. 5-15).

③ Specify the audio playback timing.

[Audio Playback at ON Event] checkbox
When selected, the sound set in ④ [Sound Clip Name] is played at the moment the detected mode is triggered to ON.

[Audio Playback at OFF Event] checkbox
When selected, the sound set in ④ [Sound Clip Name] is played at the moment the detected mode is turned OFF.

④ Set the playback sound.

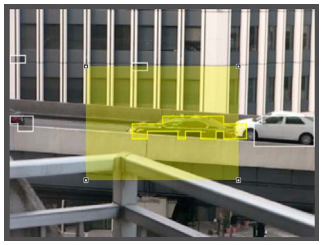
[Sound Clip Name]
Select the sound that is to be played. The sound clip name set for [Sound Clip Upload] under [Event] in the Setting page is shown in the pull-down list (P. 5-22).

[Volume]
Set the audio playback volume in the range of 1 to 100.

■ Setting Detection Areas

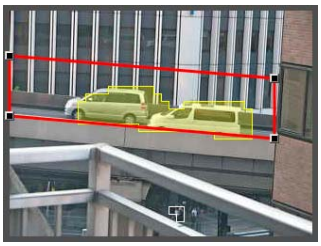
Set detection areas in the image display area.

Setting a [Rectangular] detection area
By default, a rectangle is shown in the image display area. Move or resize that rectangle to set a detection area.



Setting a [Polygonal] detection area

Specify polygonal areas with a maximum of 32 angles. Click in the image display area to form the polygon point by point. Click again at the first point to complete the polygon and set it as a detection area. The set area can also be moved by dragging it.



Note

- Drag the square marks (■) at each angle to change the shape of the polygon.
- Click [Clear] to delete the polygonal detection area.
- The camera tampering detection area cannot be changed.

Changing a [Rectangular] detection area into a [Polygonal] shape or changing a [Polygonal] detection area into a [Rectangular] shape

Changing the shape of the detection areas already set deletes that area and switches to a new drawing setting.

■ Setting Detection Criteria per Detection Type

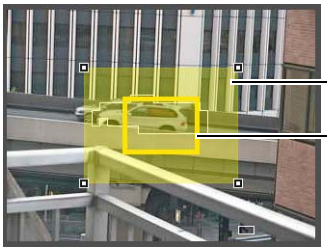
Specify different detection criteria for each detection type.

Detect criteria for [Moving Object Detection]

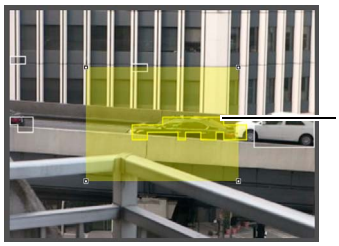
Set detection areas where you want to detect moving objects.

For [Object Size (%)], enter a value or move the slider to set the ratio of the size of an object moving in the detection area to the size of the detection area.
When the ratio of an area where the camera has detected a moving object exceeds the value set for [Object Size (%)], detected mode is triggered to ON.

When [Object Size (%)] is changed, an indicator frame showing the size of the object is displayed for 1 second in the center of the image display area, allowing specification of the settings while checking the size ratio.

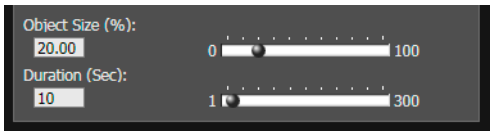


Any moving objects detected are shown with contour lines. If a moving object is smaller than [Object Size (%)], its contour lines are white. If the moving object is larger than [Object Size (%)], its contour lines take on the same color as the detection area, indicating that “detection” mode has been triggered to ON.



Detect criteria for [Abandoned Object Detection]

Set areas where you want to detect abandoned objects as detection areas.



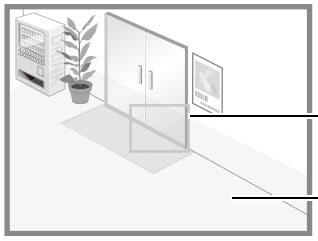
[Object Size (%)]

Enter a value or move the slider to set the ratio of the size of an object that was left behind in the detection area to the size of the detection area.
When [Object Size (%)] is changed, an indicator frame representing the area of the object is displayed for 1 second in the center of the image display area. This allows you to check the size ratio of the abandoned object detection area while specifying the [Object Size (%)] setting.

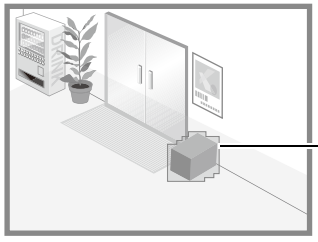
[Duration (Sec)]

Set the time that must elapse after an object has been left.

If both the values for [Object Size (%)] and [Duration (Sec)] are exceeded, detection mode is triggered to ON.



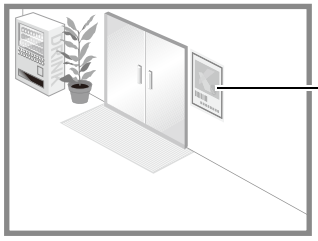
Any moving objects detected are shown with contour lines. If [Object Size (%)] and [Duration (Sec)] are not exceeded, contour lines are white. When all detection criteria are met, contour lines take on the same color as the detection area and “detected” mode is triggered to ON.



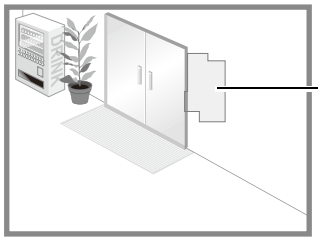
Detect criteria for [Removed Object Detection]

Set detection areas for objects whose removal you want to detect.

For [Duration (Sec)], set the time that must elapse after the object has been taken away. Detected mode will be triggered to ON when an object is taken away from the detection area for a period longer than the set [Duration (Sec)].



Any moving objects detected are shown with contour lines. As long as [Duration (Sec)] has not elapsed, contour lines are white. When [Duration (Sec)] has elapsed, contour lines take on the same color as the detection area, indicating that “detected” mode has been triggered to ON.



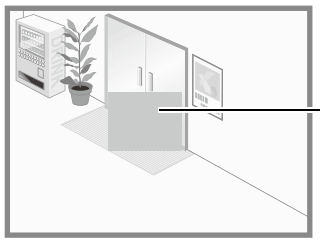
Important

Set detection areas for removed object detection so that they precisely match the contours of the object in question. Influence from the target object's shadow or adjacent objects may result in the target object being recognized as larger than actual and will not trigger Removed Object Detection. In such cases, reconfigure the detection area to outline the recognized target object.

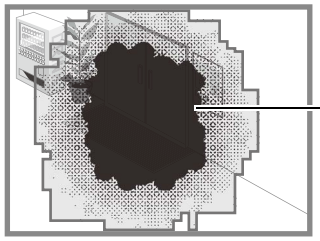
Detect criteria for [Camera Tampering Detection]

For [Camera Tampering Detection], the entire image display area becomes the detection area. “Detected” mode will be triggered to ON when the image is obstructed over an area exceeding the ratio set in [Change Ratio (%)].

When [Change Ratio (%)] is changed, an indicator frame representing the area that can be obstructed is displayed for 1 second in the center of the image display area. This allows you to check the change ratio of the camera tampering detection area, which occupies the entire image display area, while specifying the [Change Ratio (%)] setting.



Any moving objects detected are shown with contour lines. If it is smaller than [Change Ratio (%)], contour lines are white. If the image is changed for an area larger than [Change Ratio (%)], contour lines take on the same color as the detection area, indicating that “detected” mode has been triggered to ON.



Note

Right-click on the Intelligent Function Setting Tool display screen to display the menu. There, the following functions can be used.

[Copy detection area]
Copy the detection area of the detection setting selected.

[Paste detection area]
Paste the copied detection area to the detection setting selected. It cannot be copied to camera tampering detection.

[Clear detection area]
Clear the detection area of the detection setting selected. It cannot be cleared in camera tampering detection.

[Copy detection criteria settings]
Copy the detection criteria of the detection setting selected.

[Paste detection criteria settings]
Paste the copied detection criteria to the detection setting selected.

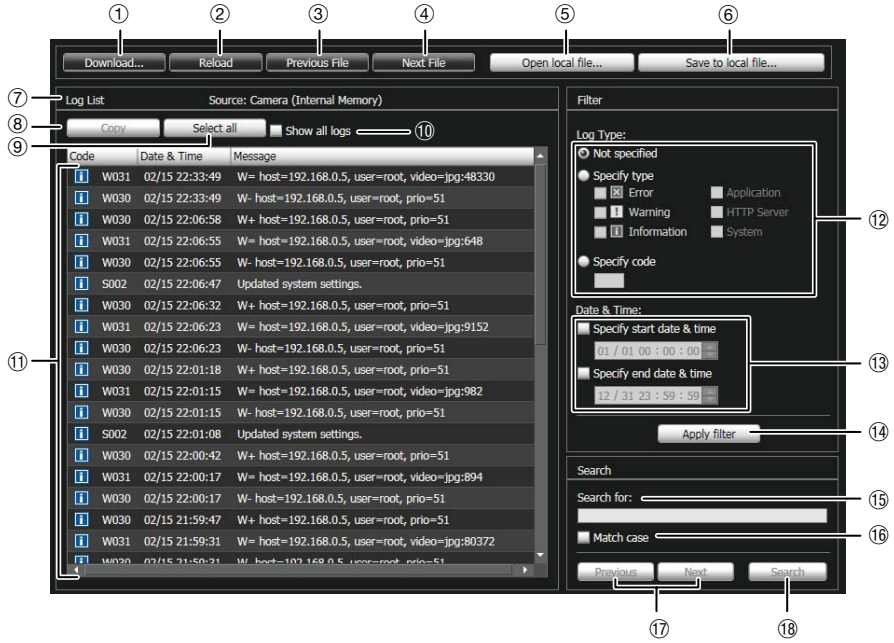
[Copy event settings]
Copy the event operations of the detection setting selected.

[Paste event settings]
Paste the copied event operations to the detection setting selected.

Log Viewer

This tool lets you view the operating condition log of the camera.

Display Screens of Log Viewer



① [Download]
Download log files from this camera or SD memory cards.

② [Reload]
Reload the displayed log file and show the latest logs.

③ [Previous File]
If there are multiple log files in the camera's internal memory or SD memory card, load and display the file before the currently shown log list.

④ [Next File]
If there are multiple log files in the internal memory or SD memory card, load and display the file after the currently shown log list.

⑤ [Open local file]
Load log files that are saved on a PC to the log display area.

⑥ [Save to local file]
Save the displayed log data as a text file to a PC.

⑦ [Source]
The name of the source from where log files are loaded is shown.
From the camera's internal memory: Camera (Internal memory)
From an SD memory card: Camera (SD card)
From files saved to a PC: File name

⑧ [Copy]
Copy to the clipboard logs that you have selected on the log display area.

⑨ [Select all]
Select all the logs that are shown in the log display area.

⑩ [Show all logs] checkbox
When selected, all logs, including those without a log code, are shown.

⑪ Log display area
The content of log files downloaded from the camera, SD memory card, or PC is shown.

⑫ [Log Type]
Select log types you want to show using the filter function.
[Not specified]:
Select to show all log types.
[Specify type]:
To specify the log type, select the level ([Error], [Warning], [Information]) and output module ([Application], [HTTP Server], [System]) of the log. Multiple checkboxes can be selected.
[Specify code]: Logs matching the entered log code are shown.

⑬ [Date & Time]
Set the date and time of the log you want to show using the filter function.
Select the [Specify start date & time] or [Specify end date & time] checkbox to set the date and time.

⑭ [Apply filter]
Show the filtered logs in the log display area.

⑮ [Search for]
Enter the character string for which you want to search.

⑯ [Match case] checkbox
Specify whether or not to enable case sensitivity in search commands. When selected, character strings perfectly matching the case in the [Search for] field are searched.

⑰ [Previous]/[Next]
Click [Next] to move down and [Previous] to move up in the search results for ⑱ [Search].

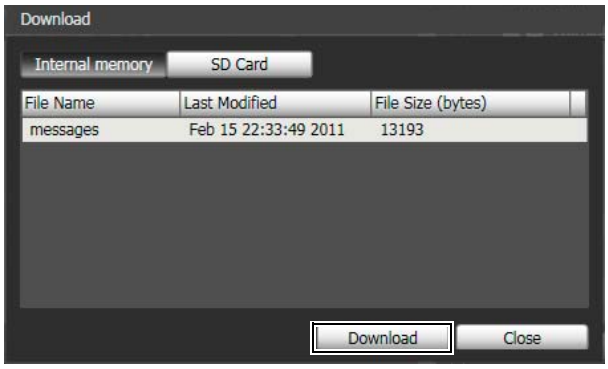
⑱ [Search]
Search logs containing the character string searched in the displayed log list and display them.

Note

Logs cannot be deleted in the Log viewer.

Downloading Log Files

When Log Viewer is launched, the latest log files will be downloaded and displayed automatically.
To download a new log file list, click [Download]. A [Download] dialog box is shown where you can select [Internal memory] or [SD Card] as a download source. When the list has been downloaded, a dialog box showing the log file list opens. Select the log file you want to view and click [Download], and the selected log file will be downloaded.



How to View Logs

The log contains the following information.

- Code
  For the log code, see “List of Log Messages” (P. 8-8).
  The log code is shown together with one of three icons corresponding to the applicable level.
  If the log has no log code, no icon is shown.

  Error Level　Warning Level

  Information Level

- Date & Time
  The date and time at which the log was generated.
- Message
  A message regarding the log.

■ Saving a Log to a File/Opening a Saved Log

How to Save

Click [Save to local file] and save using the [Save As] dialog box.

How to View

Click [Open local file] and select a log file using the [Open] dialog box.

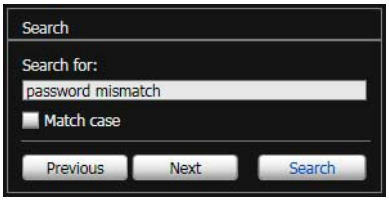
■ Copying/Searching Logs

How to Copy

Click to select the log you want to copy, and then click [Copy].

How to Search

Enter the character string for which you want to search in [Search for] and click [Search].
If the searched log is found, it is shown as selected.
Click [Previous] or [Next] to search the log above or below. Lines of logs found are shown as selected.



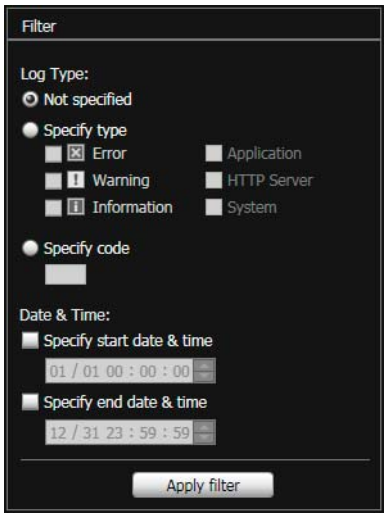
■ Showing All Logs

Select the [Show all logs] checkbox.
When selected, even logs without a log code are shown if [Not specified] is selected for the log type [Filter].

■ Showing Filtered Logs

You can filter logs by type, code and date & time to show only the necessary information.

Set the following conditions and click [Apply filter] to show only the logs matching the specified conditions.



[Log Type]
Select the [Specify type] or [Specify code] checkbox to filter logs by type. If you don't want to filter logs by type, select [Not specified].

- **Specify type**

  Specify the log level
  Select [Error], [Warning] or [Information] for the level of logs to be shown.

  Specify log output module
  Select [Application], [HTTP Server] or [System] for the output source module whose logs will be displayed.

- **Specify code**
  Specify the log code. Only logs whose code contains the entered characters are shown. If “A0” is entered, for example, logs starting with “A0” are displayed.

[Date & Time]

- [Specify start date & time]
  When this check box is selected and a date and time are entered, logs generated on or after the specified date and time are shown.
- [Specify end date & time]
  When this check box is selected and a date and time are entered, logs generated on or before the specified date and time are shown.

Important

Logs saved in the camera's internal memory are cleared when you perform [Maintenance] > [Restore Settings] and [Reboot], or press the reset switch on the camera.

Note

[Application], [HTTP Server], and [System] support the log message list List of Log Messages (P. 8-8).

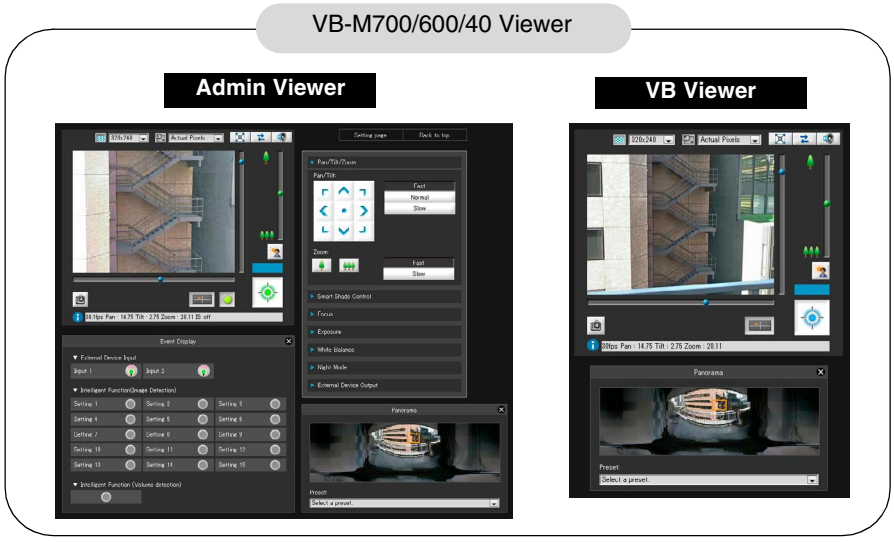
Chapter 7

Admin Viewer/VB Viewer

❑ Differences between the Admin Viewer and the VB Viewer
❑ User Authorities and Camera Control Privileges
❑ Viewer Startup and Operation
❑ Camera Control and Obtaining Camera Control Privileges
❑ Admin Viewer Operation and Settings

Overview of Viewer

Accessing this viewer via a web browser allows you to display images and operate the camera.
Two types of viewer are available, the Admin Viewer and the VB Viewer.



Important

Use the RM-Lite Viewer to display H.264 video from the camera.
Only JPEG images can be displayed using the VB-M700/600/40 viewer.

Major Differences Between the Admin Viewer and the VB Viewer

- **The operable ranges differ between the viewers.**
  Admin Viewer:
  Users can use the administrative control functions, such as shooting adjustment settings or event detection display.
  VB Viewer:
  This viewer is limited to basic image operations for viewing images.
- Accessible controls are different.
  Admin Viewer:
  Users with privileged camera control can use this viewer.
  Password authentication is required.
  Authorized users must have privileged camera control assigned by the Administrator beforehand (P. 5-23).

VB Viewer:
Users with camera control authority can use this viewer. You can set the applicable options to enable/disable authentication, etc.

User Authorities and Camera Control Privileges

User authorities and their relative camera control privileges are specified as follows.

User Authority	Camera Control Privileges		Image Distribution	Audio Distribution
	Privileged Camera Control	Camera Control		
Administrator	○	○	○	○
Authorized user	○ (Can be changed)	○ (Can be changed)	○ (Can be changed)	○ (Can be changed)
Guest user	×	○ (Can be changed)	○ (Can be changed)	○ (Can be changed)

* Changing: The Administrator can change the privileges of Authorized Users and Guest Users (P. 5-23).

The four authorities that can be set for users are privileged camera control, camera control, image distribution and audio distribution.
Users must have privileged camera control to use the Admin Viewer.
Users must have the image distribution authority to display images using the VB Viewer. To operate the camera using the VB Viewer, users must also have camera control authority.

Audio distribution authority is required to receive audio using the Admin Viewer and the VB Viewer.

[Administrator]

This user is given all authorities. The user name is fixed to “root”.

The Administrator can launch the Admin Viewer from the [Admin Viewer] link on the top page.

[Authorized User]

Authorized users can launch the Admin Viewer from the [Admin Viewer] link on the top page if they have privileged camera control. Authorized users can no longer launch the Admin Viewer upon losing privileged camera control. However, they can still launch the VB Viewer. Launching the VB Viewer can be prohibited by disabling all authorities of a given authorized user (P. 5-23).

[Guest User]

This user can only use the following functions:
Backlight compensation, snapshots, image display and audio distribution

M40 Pan, tilt, zoom camera control

Guest users can launch the VB Viewer from the [VB Viewer] link on the top page. The Administrator can completely prohibit all camera access from guest users by disabling all their authorities.

Important

- At any time, the [Administrator] can launch the Admin Viewer to override the camera control privileges of another instance of the Admin Viewer launched by an [Authorized User]. The Administrator can retain the camera control privileges, but doing so prevents authorized users from obtaining camera control privileges. After viewing the necessary information, the Administrator should always close the viewer or click [Obtain/release Camera Control] to release the control privileges.
- The Admin Viewer launched by the [Administrator] can access only one camera at a time. While administrator authorities are used to access the camera from a given PC, access with administrator authorities from other PCs will be not be granted. In contrast, the camera can be accessed simultaneously by multiple instances of the Admin Viewer launched by [Authorized Users] from different PCs. Take note, however, that when controlling the camera, the control privileges are given to the user who accessed the camera most recently.

Note

- The factory default setting gives privileged camera control to [Authorized User] as well.
- If all guest user authorities are disabled, the user authentication dialog box will appear when the VB Viewer is launched. When an authorized user or administrator name and password are entered, the VB Viewer can be used with authorized user or administrator authorities, respectively.
- The authorities of authorized users are assigned as follows.

List of Authorized User Authorities

Provided controls	Viewer	Operations
Privileged Camera Control Camera Control Image Distribution Audio Distribution	Admin Viewer	All operations possible in the Admin Viewer. [Details] Backlight compensation On/Off switch, snapshots, image display size change, image capture size change, audio button operation, reconnect button operation, full screen mode, smart shade control, focus, exposure, white balance, night mode, external device output control, and event display. M700 M600 Viewer PTZ operation (Image cropping and expanded/contracted display functions), SD memory card insert status. M40 Camera PTZ (PTZ: Pan, tilt and zoom functions) speed/operation, event display, panorama display.
	VB Viewer	All operations possible in the VB Viewer. [Details] Backlight compensation On/Off switch, snapshots, image display size change, image capture size change, audio button operation, and reconnect button operation. M40 PTZ (PTZ: Pan, tilt and zoom functions) operations of the camera.
Camera Control Image Distribution Audio Distribution	VB Viewer	All operations possible in the VB Viewer. [Details] Backlight compensation On/Off switch, snapshots, image display size change, image capture size change, audio button operation, and reconnect button operation. M40 PTZ (PTZ: Pan, tilt and zoom functions) operations of the camera.
Image Distribution Audio Distribution	VB Viewer	Image display size change, image capture size change, audio button operation, and reconnect button operation. M40 Panorama display.
Image Distribution*1	VB Viewer	Image display size, image capture size change, and reconnect button operation. M40 Panorama display.

*1 If image distribution authority is disabled, users can no longer use VB Viewer.

Launching the Viewer

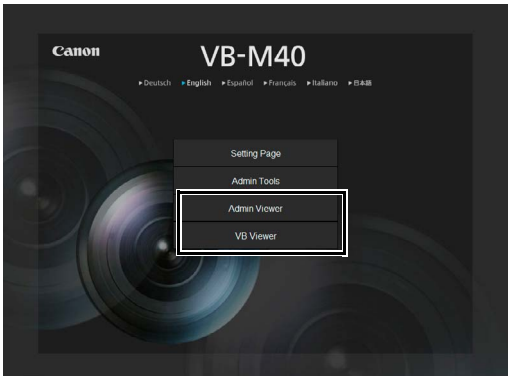
Launching the Viewer

Important

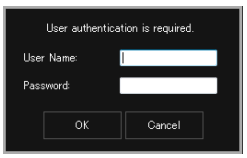
- The Canon Inc. Certificate must be registered on a PC that is using the Admin Viewer. (P. 4-3)
- This Operation Guide explains relevant operations based on the IP address “192.168.100.1” (factory default setting). You must enter the actual IP address set for the camera when following instructions.

1 Access “http://192.168.100.1/” via the web browser.

2 Click [Admin Viewer] or [VB Viewer] according to the user.

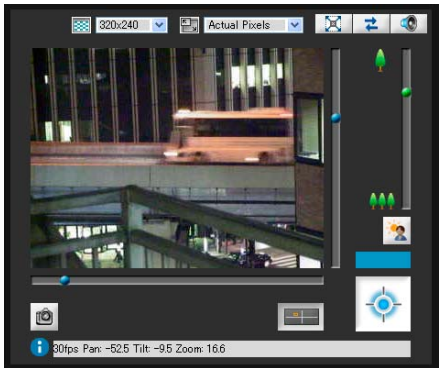


3 For [Admin Viewer], enter the user name and password.



Refer to “User Authentication” in “Chapter 4 Top Page of the Camera” (P. 4-2) for information on the user name and password.

The viewer is launched.



Shutting Down the Viewer

Close the web browser in the viewer to shut down.

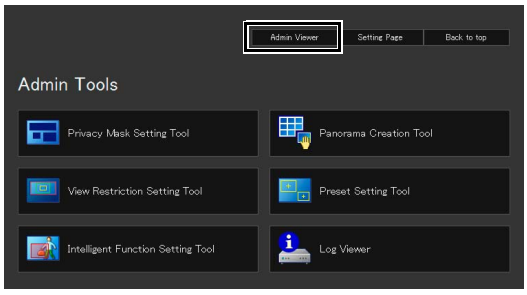
Connecting from Admin Tools

Only the administrator can connect to this viewer.

1 Launch Admin Tools.

(Refer to “Launching the Admin Tools” (P. 6-4) for information on launching the Admin Tools.)

2 Click [Admin Viewer].



How to Operate the Viewer

Display Screens of Admin Viewer

The following gives an overview of the functions of buttons, boxes and other screen elements displayed in the Admin Viewer.
The following screen shows the Admin Viewer with all panels opened. In reality, you can open only the panels you need in the web browser and scroll vertically or horizontally.

① Image Display Area
Displays images received from the camera.

② SD Memory Card Insert Status Icon M700 M600
Displays whether or not the SD memory card is mounted.
SD memory card is mounted.
SD memory card is not mounted.

③ Video Size
Set the size of video received from the camera.

④ Video Display Size
Set the display size of the image shown on the screen.

⑤ [Full Screen Mode] button
Live images are shown in full screen mode.

⑥ [Reconnect] button
The camera is reconnected.

⑦ [Audio Reception] button
Audio from the camera is received and output.

⑧ Slider for tilt M40
This slider is used to control the tilt (vertical movement) of the camera.

⑨ Slider for pan M40
This slider is used to control the pan (horizontal movement) of the camera.

⑩ Slider for zoom M40
This slider is used to control the zoom ratio.
You can zoom in (telephoto) by moving the knob

upwards or zoom out (wide-angle) by moving the knob downwards.

⑪ Control Privilege Status Indicator
Whether or not the current client has camera control privileges is shown in this area.

⑫ [BLC] (Back Light Compensation) button
This button turns on/off backlight compensation. This control is effective when the image is dark due to backlight.

⑬ [Obtain/release Camera Control] button
This button is used to obtain/release the camera control privileges.

⑭ [Get a Snapshot] button
A still image from the moment of clicking is displayed in a new window.

⑮ [Panorama Display] button M40
The panorama display panel is displayed.

⑯ [Viewer PTZ] button M700 M600
The viewer PTZ panel is displayed.

⑰ [Event Display] button
The event display panel is displayed.

⑱ Information Field
Information messages, warning messages and error messages are shown to the user.

⑲ [Setting Page]
The screen switches to the Settings Menu page.

⑳ [Back to top]
The screen switches to the top page of the camera.

㉑ [Pan/Tilt/Zoom] M40
Control the camera's pan, tilt and zoom operations. You can also alter the operation speed.

㉒ [Smart Shade Control]
You can change the smart shade control level.

㉓ [Focus]
You can control the focus.

㉔ [Exposure]
You can control the exposure.

㉕ [White Balance]
You can control the white balance.

㉖ [Night Mode]
You can switch between day mode and night mode.

㉗ [External Device Output]
Control the output to an external device.

㉘ Panorama Display Panel M40
This panel is displayed upon clicking the [Panorama Display] button.

㉙ Panorama Display Area M40
Displays panorama images registered in the camera.
You can operate the camera by controlling the frame lines within the panorama display area.

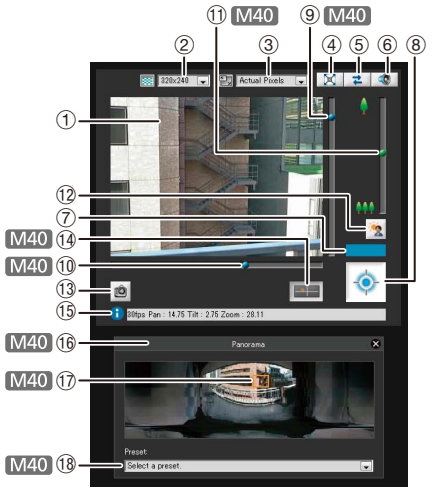
㉚ Preset selection box M40
You can control the camera with presets registered in the camera beforehand.

㉛ Viewer PTZ Panel M700 M600
This panel is displayed upon clicking the [Viewer PTZ] button.

㉜ Viewer PTZ Area Designator M700 M600
Set the cropped area in the image display area.

㉝ Event Display Panel
This panel is displayed upon clicking the [Event Display] button.
The panel shows the input status of external devices and the status of image and volume detection by intelligent functions.

VB Viewer



① Image Display Area
Displays images received from the camera.

② Video Size
Set the size of video received from the camera.

③ Video Display Size
Set the display size of the image shown on the screen.

④ [Full Screen Mode] button
Live images are shown in full screen mode.

⑤ [Reconnect] button
The camera is reconnected.

⑥ [Audio Reception] button
Audio from the camera is received and output.

⑦ Control Privilege Status Indicator
Whether or not the current client has camera control privileges is shown in this area.

⑧ [Obtain/release Camera Control] button

This button is used to obtain the camera control privileges.

⑨ Slider for tilt M40
This slider is used to control the tilt (vertical movement) of the camera.

⑩ Slider for pan M40
This slider is used to control the pan (horizontal movement) of the camera.

⑪ Slider for zoom M40
This slider is used to control the zoom ratio.
You can zoom in (telephoto) by moving the knob upwards or zoom out (wide-angle) by moving the knob downwards.

⑫ [BLC] (Back Light Compensation) button
This button turns on/off backlight compensation. This control is effective when the image is dark due to backlight.

⑬ [Get a Snapshot] button
A still image from the moment of clicking is displayed in a new window.

⑭ [Panorama Display] button M40
The panorama display panel is displayed.

⑮ Information Field
Information messages, warning messages and error messages are shown to the user.

⑯ Panorama Display Panel M40
This panel is displayed upon clicking the [Panorama Display] button.

⑰ Panorama Display Area M40
Displays panorama images registered in the camera. You can operate the camera by controlling the frame lines within the panorama display area.

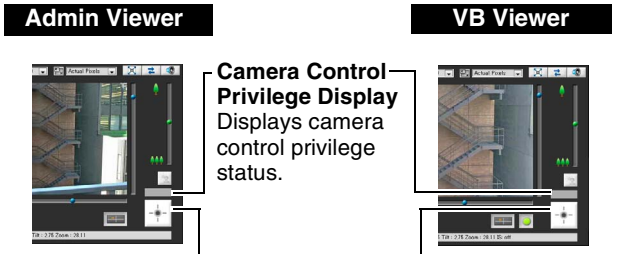
⑱ Preset selection box M40
You can control the camera with presets registered in the camera beforehand.

Obtaining Camera Control Privileges

The camera cannot be controlled by multiple users simultaneously. Only the user with the control privileges can control the camera. To perform backlight compensation camera control, you must obtain control privileges first.

How to Operate

Click the [Obtain/release Camera Control] button to obtain the control privileges.


Admin Viewer
VB Viewer
Camera Control Privilege Display
Displays camera control privilege status.
[Obtain/release Camera Control] button
This button is used to obtain/release the camera control privileges.
* With the VB Viewer, you can only obtain the camera control privileges.

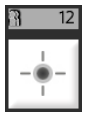
■ Camera Control Privilege Status Indicator

Display of the camera control buttons and camera control status indicator changes according to the status of control privileges shown as follows.

Control privileges not assigned

The control privilege status indicator is shown in gray

Waiting for control privileges



When waiting for control privileges in the VB Viewer, the remaining standby time is shown on the control privilege status indicator.

Control privileges assigned
(restricted time counting down)

If another user is waiting for control privileges while you are assigned control privileges, your remaining time is shown on the control privilege status indicator.

Control privileges assigned

The control privilege status indicator is shown in blue.
The [Obtain Camera Control] button in the VB Viewer is blue in the center.

The [Obtain/release Camera Control] button in the Admin Viewer is yellow green in the center.

Video paused

The video is paused when the viewer is in full screen mode. An icon indicating the paused status is shown in the control privilege status indicator.

Controlling the Camera

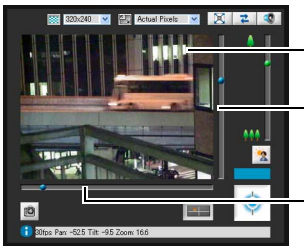
Obtain camera control privileges before carrying out the following operations. These operations can be carried out in both the Admin Viewer and the VB Viewer.

■ Changing the Camera Angle M40

You can change the angle by doing one of the following:

Use the pan and tilt sliders.
The camera angle will change according to the knob position on the sliders. The knob can also be moved by clicking on an empty part of the slider.

Click on the image


You can center on a point in the image by clicking on it.
This slider is used to control the tilt (vertical movement) of the camera.
This slider is used to control the pan (horizontal movement) of the camera.

Note

In the Admin Viewer, you can also control the pan and tilt with the camera control button (P. 7-14).

■ Change the Camera Angle in the Panorama Display Area M40

1 Click the [Panorama Display] button.

2 Change the camera angle in the panorama display area.

The frame lines within the display area show the image currently being captured by the camera.
Blue frame lines mean that you do not have camera control privileges.
Yellow frame lines mean that you have camera control privileges.

Move by clicking
Clicking a point in the panorama window moves the pan and tilt to center on that point.

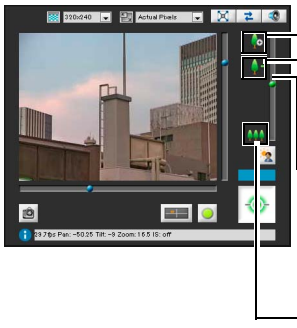
Move by dragging
Dragging the yellow frame lines in the panorama window moves the pan and tilt to capture that area.

Note

- Operations carried out by clicking on the image will not be precise.
- Users operating the camera in the Admin Viewer with the administrator authorities can control the camera outside the view restrictions.
  Users operating the camera in the Admin Viewer with the authorized user authorities can control the camera only within the view restrictions.
- Users operating the camera in the VB Viewer can control the camera within the view restrictions.

■ Changing the Camera Zoom Ratio M40

Move the knob on the slider up or down to zoom in or out
The camera zoom ratio will change according to the knob position on the slider. The knob can also be moved by clicking on an empty part of the slider.


Zoom telephoto end
Optical telephoto end
(only when digital zoom is on)
Slider for zoom
Move the knob upwards to zoom in (telephoto)
Move the knob downwards to zoom out (wide-angle)
Wide end

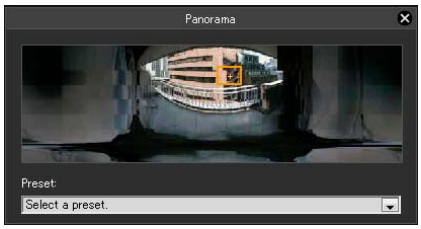
Note

- If [Digital Zoom] is set to [Enable] in [Camera] on the Setting page, the icon for the optical telephoto end is displayed. (P. 5-10).
- In the Admin Viewer, you can also control the zoom with the Camera Control button (P. 7-14).

■ Change the Zoom Ratio in the Panorama Display Area M40

1 Click the [Panorama Display] button.

2 Change the zoom ratio in the panorama display area displayed.



You can change the zoom ratio by dragging the yellow frame lines in the panorama window and changing the size of the frame. The zoom ratio will adjust to capture the area in the changed frame.

Note

Clicking outside the yellow frame lines and dragging will create blue frame lines. When you release the mouse button, the blue lines will turn yellow and the camera will change the pan, tilt and zoom in order to capture that area.

■ Using the Preset M40

You can control the camera using presets registered in the camera beforehand (P. 6-16).

1 Click the [Panorama Display] button.

2 Click the preset selection box and select a preset from the displayed list.

3 Go to the selected preset camera angle.

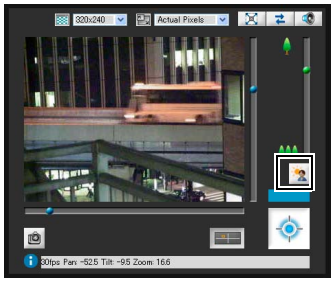
Note

Register presets beforehand using the Preset Setting Tool (P. 6-19). Registered presets will appear in the preset selection box.

■ Compensating Backlight

This control is effective when the image is dark due to backlight.

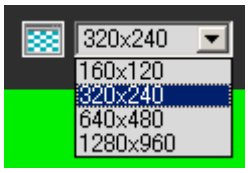
Clicking [BLC] brightens images that are dark due to backlight.
Clicking the button again cancels backlight compensation.



Setting Video and Audio

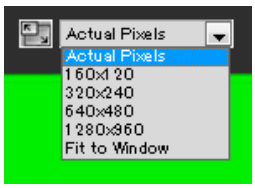
■ Changing the Image Size

You can set a desired image size for video received from the camera. Select from [160x120], [320x240], [640x480] or [1280x960].



■ Changing the Display Screen Size

You can change the display screen size. Select from [Actual Pixels], [160x120], [320x240], [640x480], [1280x960] or [Fit to Window].
[Actual Pixels] displays the video at the size at which it is being captured.
[Fit to Window] displays the video at the maximum size possible in the web browser window.



Note

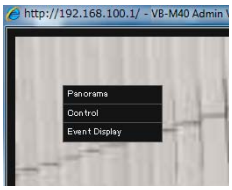
- When the VB Viewer is launched, the image size set for the camera is applied.
  When the Admin Viewer is launched for the first time, the camera settings are applied, but from then on settings from the previous time are used.
- When the viewer is launched, the display screen size opens at [Actual Pixels].

■ Displaying in Full Screen Mode

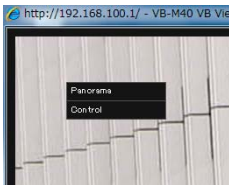
You can show images over the entire display. Clicking this button will open a new window to show video in the full screen mode.

To close the full screen display window, click the close button of the window.
You can display the necessary panels for controlling the camera in the full screen mode. Right-click on the screen and select the necessary panel from the menu that appears.

Admin Viewer



VB Viewer

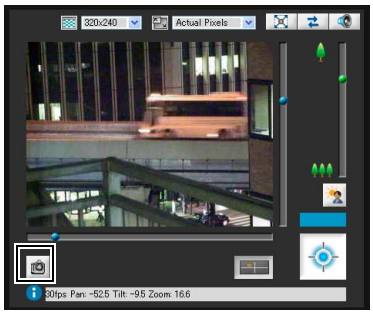


[Panorama] M40 Displays the panorama display panel.
[Viewer PTZ] M700 M600
The viewer PTZ panel is displayed. (Admin Viewer only)
[Control] Displays the camera control panel.
[Event Display] Displays the event display panel (Admin Viewer only).

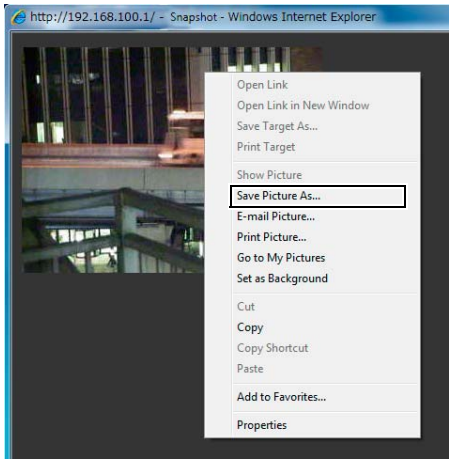
You can move any panel by clicking the title bar and dragging it to the desired position.

■ Getting a Snapshot

Captures a still image from live images and displays it in a new window.
You can also save still images.
Click [Get a Snapshot] button at the moment you want to capture a still image.



A new window will open showing a still image from the moment you clicked it.
To save a still image, right-click on it and select [Save Picture As] from the menu that appears.
Enter the file name desired and save the image.



You can select other convenient functions from the display menu.

■ Reconnect

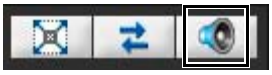
To reconnect the camera, click this button.

Note

If you reconnect, audio reception will stop and camera control privileges will be lost.
In the VB Viewer, the video size and display screen size will also return to the default settings.

■ Receiving Audio

You can receive audio through the microphone attached to the camera.



Click this button to receive audio.
Select the appropriate volume on the volume panel that appears.

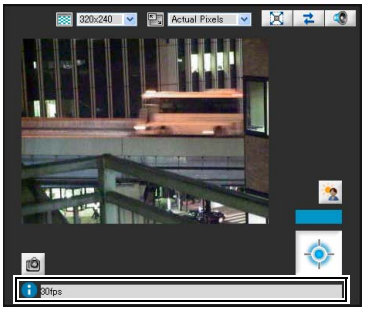
Important

- Audio reception functions cannot be used during IPv6 connection.
- Audio cannot be received if you are using a proxy server.
- Audio reception functions cannot be used when connected via SSL encrypted communications.

Note

- To receive audio, go to [Audio Server] in [Server] beforehand and set [Audio Transmission from the Camera] to [Enable] (P. 5-18).
- Closing the volume panel will end the audio reception.
- The first time the volume panel is launched, a message to install the add-on “Canon Network Camera Audio Receiver” will be displayed in the information bar of the web browser. Install the add-on.

Checking Information



The following icons will appear depending on the content of the information displayed.

Icon (color)	Meaning	Description
(Blue)	Information	Appears when a camera operation has been successful. The following information appears. • Help messages, such for each button and pull down menu • Frame rate information • M40 Pan, tilt, zoom camera information, image stabilization information
(Yellow)	Warning	A message will appear notifying the user when camera control privileges cannot be obtained, audio reception stops, etc.
(Orange)	Error	Appears when a system error occurs.

Important M40

If the image stabilizer function is turned on in the settings page (P. 5-10), the actual viewing angle of the image will be smaller than the viewing angle displayed in the information field (For On1: approx. 83%; for On2: approx. 50%).
Also, the viewing angle of image display becomes smaller than the angle (frame) displayed in the panorama display area.

Note

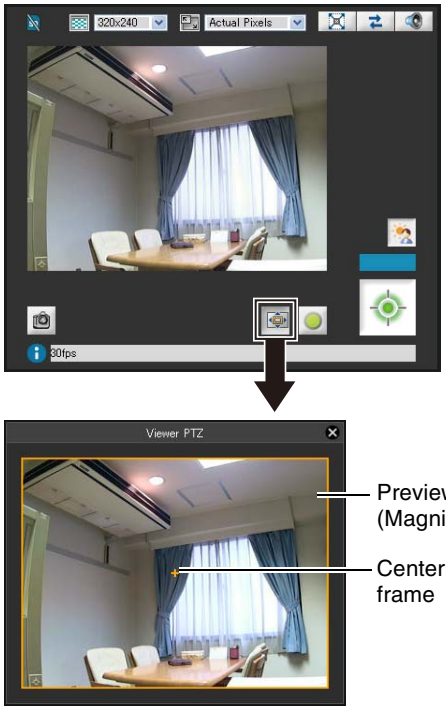
For details on the messages, see “List of Viewer Messages” (P. 8-16).

Performing Operations and Settings as the Administrator

The operations and settings that can be performed only in the Admin Viewer are explained.

Magnifying Part of the Image (Viewer PTZ) M700 M600

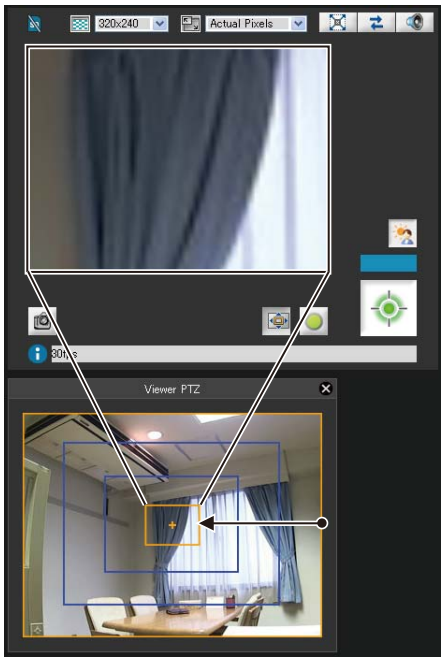
You can use the Viewer PTZ panel to magnify part of the camera's image in the image display area.
Click the [Viewer PTZ] button to display the viewer PTZ panel.



The initial status of the Viewer PTZ panel shows the preview frame (yellow) occupying the entire image.

■ Adjusting the Preview Frame Size

Drag the preview frame line to make the frame smaller, and a magnified view of the image in the frame will be shown in the image display area.



The preview frame turns blue when you drag it.

Note

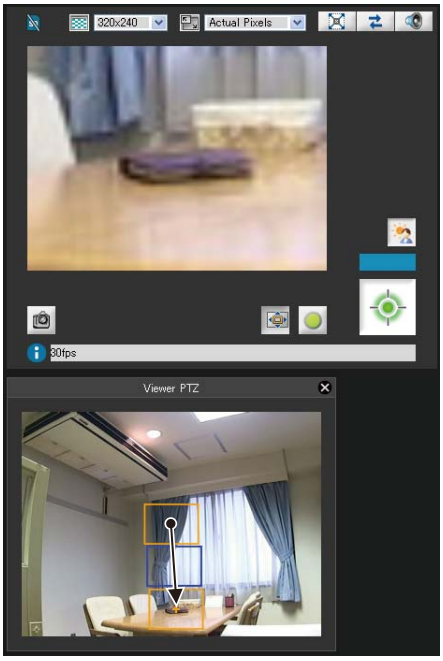
- The aspect ratio of the preview frame is always 3:4.
- The Viewer PTZ uses digital zoom, so the higher the digital zoom ratio, the lower the quality of the image becomes.

■ Moving the Preview Frame

You can move the preview frame to the desired position.

Move by dragging

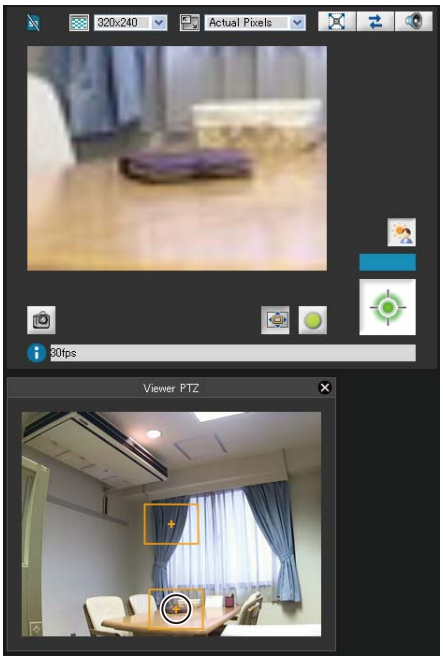
Click within the preview frame and drag it over the subject that you want to see magnified.



The preview frame turns blue when you drag it.

Move by clicking

Click a position outside of the preview frame and the preview frame will move to that position. Click the subject that you want to see magnified.

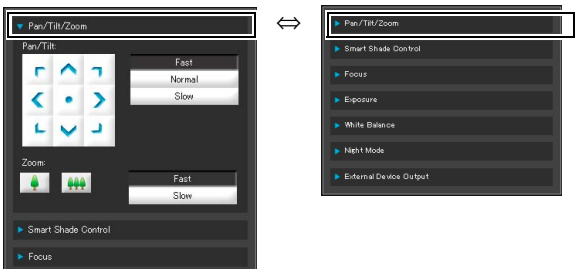


Note

- After changing the preview frame, the image display area will continue to display the cropped image corresponding to the preview frame even after the Viewer PTZ panel is closed. However, when you reconnect to Admin Viewer, the initial status will be restored.
- The image display for the Viewer PTZ panel is subject to the settings configured in [Maximum Number of Clients] and [Maximum Connection Time (sec.)] under [Image Server] in the Setting page. Therefore, depending on the settings, the image may not display or will display for a certain amount of time only. In such cases, see “The image is not displayed in the Viewer PTZ panel.” and “The image disappears from the Viewer PTZ panel.” under “Troubleshooting” in “Chapter 8, Appendix” (P. 8-6, P. 8-7) and confirm the settings.
- To return to the original display from magnified view, drag the preview frame to its original size (entire screen).
- The cropped position in the image display area will be reflected in full screen mode as well.

Opening/Closing Control Items

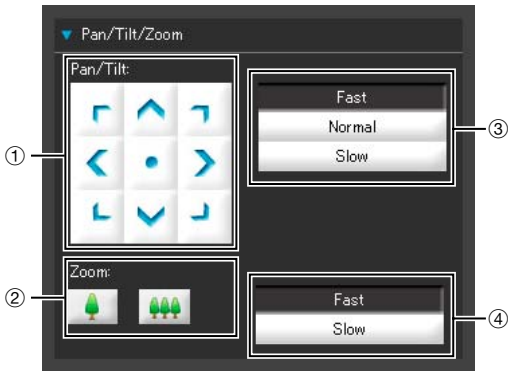
Clicking the title of a control item will open or close it.



You can open the various control items even without obtaining the camera control privileges, but the items will be grayed out.

Performing Operations and Settings M40

Click the camera control buttons to set the pan, tilt and zoom operations as well as the speed.



① [Pan/Tilt] button
Move pan and tilt in the direction of the arrows. Operation will continue as long as you are holding down the button and will stop when you release it. Clicking the center button will make the camera face straight forwards.

② [Zoom] button
Zooms in or out. Operation will continue as long as you are holding down the button and will stop when you release it.

③ [Pan/Tilt] Speed
Select a speed from [Fast], [Normal] and [Slow].

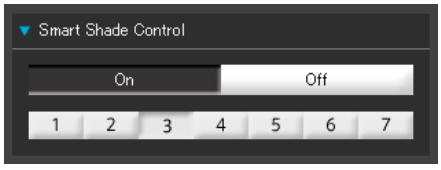
④ [Zoom] Speed
Set the speed to [Fast] or [Slow].

Note

Changing the [Pan/Tilt] speed or [Zoom] speed will not change the speed of the slider, or of the pan, tilt or zoom in panorama.

Setting the Smart Shade Control

The smart shade control function differs from backlight compensation in that only dark areas are brightened while bright areas are kept intact.



① [Smart Shade Control]
Set to [Off] or [On].

② Adjusting the Smart Shade Control
When smart shade control is [On], set one of the 7 levels from [1] (weak) to [7] (strong).

Example: If the background is bright and the subject is hard to see, this function brightens dark areas to make the subject clearer.
In comparison to backlight compensation, smart shade control can reduce overexposure of bright areas.

OFF

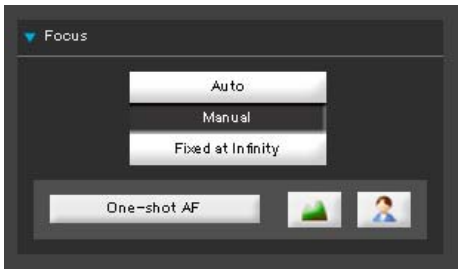
Smart Shade Control

BLC (Back Light Compensation)

Note

- When [On] is selected for smart shade control, the image file size increases.
- When [On] is selected for smart shade control, screen noise may increase. If noise is noticeable, lower the control level.

Setting the Focus



[Auto] M40 : Automatically focuses on the subject.
[Manual] : You can adjust the focus manually by pushing the (far) and (near) buttons.
Clicking [One-shot AF] will use autofocus to focus on a subject and then stop in manual focus.
[Fixed at Infinity] : You can set the focus so that it is fixed near infinity.

Important

- If it is set in the Admin Viewer, the same focus mode will occur in the viewers of other users also.
- Setting the shutter speed at 1/1 to 1/4 in manual exposure (P. 7-15) will disable the [Auto] (VB-M40 only) and [One-shot AF] focus modes in camera control. Switch the focus to [Manual] and adjust it to your subject.
- Refer to the following for focus ranges when Night Mode (P. 5-11, P. 7-17) is enabled.

M700 M600 Notes on P. 3-8

M40 Notes on P. 5-10

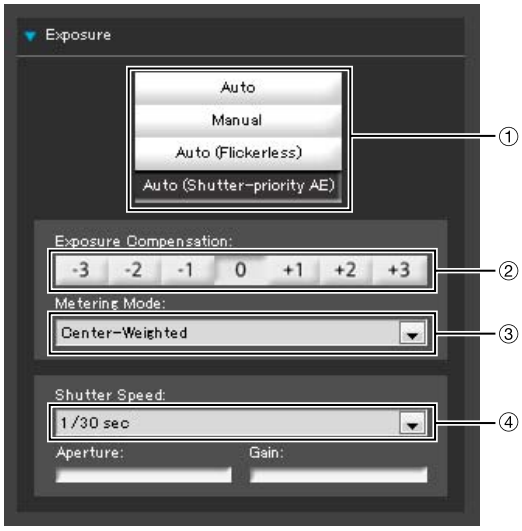
M40

- Changes to focus mode in the Admin Viewer will not be reflected in the settings on the setting page.
- Note that if you set the focus manually it will remain fixed.

M700 M600

- Use focus operations in the Admin Viewer for temporarily checking subjects at other focal points. To fix a long-term focal point, use the Camera Angle Setting Tool.

Setting the Exposure



① Exposure Mode
Select from [Auto], [Manual], [Auto (Flickerless)] or [Auto (Shutter-priority AE)].
If [Auto] is selected for [Day/Night] under [Camera] in the Setting page (P. 5-11), select [Auto], [Auto (Flickerless)] or [Auto (Shutter-priority AE)].
For an explanation on each item set in the exposure mode, see the setting page (P. 5-9).

② [Exposure Compensation]
When [Auto], [Auto (Flickerless)] or [Auto (Shutter-priority AE)] is selected for the exposure mode, the exposure compensation value desired can be selected from seven levels (-3 to +3) using the applicable button.
To darken the image, select a negative value. To brighten the image, select a positive value.

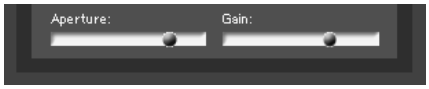
③ [Metering Mode]
When [Auto], [Auto (Flickerless)] or [Auto (Shutter-priority AE)] is selected for the exposure mode, the metering mode can be selected from [Center-Weighted], [Average] or [Spot].

[Center-Weighted]
The entire screen is metered by focusing on the center of the screen.
Even when slightly darker/brighter areas are present on the periphery of the screen, an appropriate exposure can be achieved for the subject near the center.
Use this mode if the subject is positioned near the center of the screen.

[Average]
The entire screen is metered by averaging.
A stable exposure can be achieved even in a capture environment where there are notable brightness differences within the screen.
Use this mode to stabilize the exposure in locations where vehicles or people are moving.

[Spot]
The center of the screen is metered.
An appropriate exposure can be achieved for the subject at the center of the screen regardless of the brightness/darkness on the periphery of the screen. Use this mode if you want to adjust the exposure to the center of the screen because the subject is receiving a spotlight or backlight, etc.

④ [Shutter Speed]
When [Manual] or [Auto (Shutter-priority AE)] is selected for the exposure mode, select the shutter speed desired. If [Manual] is selected, set the shutter speed in the range of [1/1 sec.] to [1/8000 sec.] from a pull-down menu. If [Auto (Shutter-priority AE)] is selected, set the shutter speed in the range of [1/8 sec.] to [1/8000 sec.] from a pull-down menu.



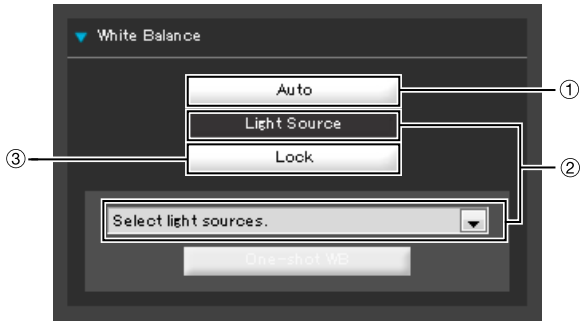
⑤ [Aperture]
If [Manual] is selected for the exposure mode, set a desired aperture value.
Moving the slider to the left closes the aperture and darkens the image. Moving the slider to the right opens the aperture and brightens the image.

⑥ [Gain]
If [Manual] is selected for the exposure mode, set a desired gain value.
Moving the slider to the left decreases the gain (sensitivity to brightness) and darkens the image. Moving the slider to the right increases the gain and brightens the image.

Important

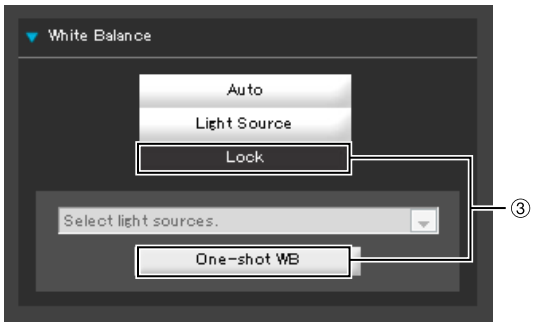
If the subject is a traffic signal or electronic scoreboard, etc., the captured image may flicker.
In this case, try changing the exposure mode to [Auto (Shutter-priority AE)] and then select a shutter speed lower than 1/100, to see if the situation improves.

Setting White Balance



① [Auto]
The white balance is adjusted automatically.

② [Light Source]
Select the light source from the pull-down menu below according to the condition in which the camera is used.
[Daylight Fluorescent] : Select this option to capture video under daylight fluorescent lighting.
[White Fluorescent] : Select this option to capture video under daylight fluorescent lighting or white fluorescent lighting.
[Warm Fluorescent] : Select this option to capture video under warm fluorescent lighting.
[Mercury Lamp] : Select this option to capture video under mercury lamps.
[Sodium Lamp] : Select this option to capture video under orange sodium lamps.
[Halogen Lamp] : Select this option to capture video under halogen bulbs or incandescent bulbs.



③ [Lock]
The white balance is fixed to that of the video currently received.
To forcibly fix the white balance according to the light source, use [One-shot WB].
Example of Setting Method:
Irradiate a white subject (white paper, etc.) using the light source and capture the subject over the entire screen. In this condition, select [One-shot WB].

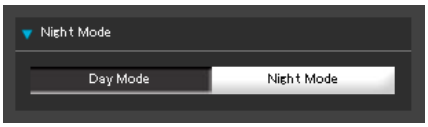
Important

- Since the light source selection options are based on representative characteristics, proper colors may not be achieved depending on the applicable light source. In this case, use the [One-shot WB] function.
- If the subject looks greenish under mercury lamps in the [Auto] mode, select the [Mercury Lamp] mode under light source. If the image is still not shown in appropriate colors under mercury lamps when the [Mercury Lamp] mode is selected under light source, use the [Auto] mode.
- When the subject has only one color or when sodium lamps, mercury lamps and certain other fluorescent lightings are used, camera colors may not be adjusted automatically.
- When [Night Mode] is set (including when it is set to [Auto] and night mode is judged to be applicable), the white balance function cannot be used.
- Notes on capturing video continuously day and night
  If a subject that seldom changes is captured in a location where the light source changes gradually, such as when capturing a subject continuously day and night, the image may not be shown in appropriate colors.

  M40

  In this case, adjusting the image captured via operations such as pan, tilt and zoom will correct this problem.

Setting the Night Mode



Note

The Night Mode cannot be used if [Auto] is set for day/night under [Camera] on the Setting page (P. 5-11).

[Day Mode]
Color image can be viewed in the normal mode.

[Night Mode]
Images are shown in black and white, due to the disabling of the infrared cut filter.

Note

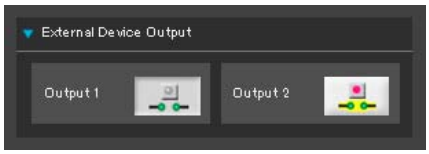
Refer to the following for focus ranges when Night Mode (P. 5-11, P. 7-17) is enabled.

M700 M600 Notes on P. 3-8

M40 Notes on P. 5-10

Operating the External Device Output

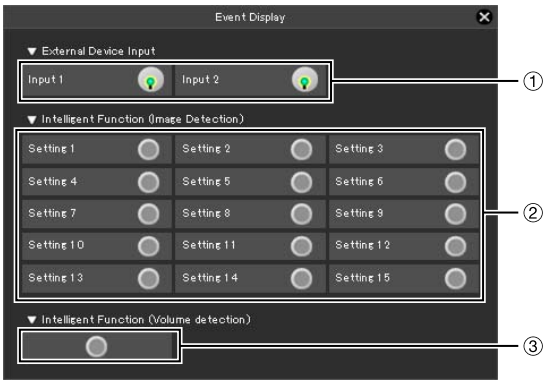
You can operate the external device output and display the current output status using an icon. The [ON]/[OFF] status can be switched by clicking this icon.



Example:
Output1: Output OFF
Output2: Output ON

Displaying Event Status

Clicking the [Event Display] button will show the event display panel, which shows the input status of external devices, as well as the status of image and volume detection by the intelligent function.



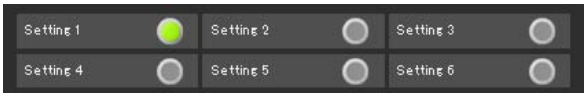
① [External Device Input]
When a contact input signal is received from an external device, input will be turned ON and an icon will be displayed.

Example:
Input1: Input OFF
Input2: Input ON

② [Intelligent Function (Image Detection)]

The status of intelligent function (image detection) will be displayed. When the detection settings configured in intelligent functions (Moving Object Detection, Abandoned Object Detection, Removed Object Detection or Camera Tampering Detection) enter Detected mode, the corresponding icon will turn green (P. 6-27).

If names are entered in [Detection Setting Name] in Intelligent Function Setting Tools (P. 6-27), [Setting 1] to [Setting 15] will be displayed with the corresponding name.



Example:
Setting 1: Image Detection status ON
Other settings: Image Detection status OFF

Note

The icon signifying Detection mode will be displayed for a maximum of five minutes (except for Moving Object Detection).

③ [Intelligent Function (Volume detection)]

The volume detection status is displayed. When sound that meets the criteria selected under [Event] > [Volume Detection] in the Setting Menu is detected, the icon turns green.

Example:
Volume Detection status ON

Chapter 8

Appendix

- ❏ SD Memory Card Access
- ❏ Modifiers
- ❏ Troubleshooting
- ❏ List of Log Messages
- ❏ List of Viewer Messages
- ❏ Restore Settings
- ❏ List of Factory Default Settings
- ❏ Index

SD Memory Card Access

You can set the camera so that the following data is saved automatically to the camera's SD memory card. (“Chapter 5 Settings Page”, “[Memory Card] SD Memory Card Operations and Settings” (P. 5-30)).

- JPEG images when recording-mode stream transmission failed to be sent due to network errors
- JPEG images when HTTP or FTP upload failed due to network errors
- Log

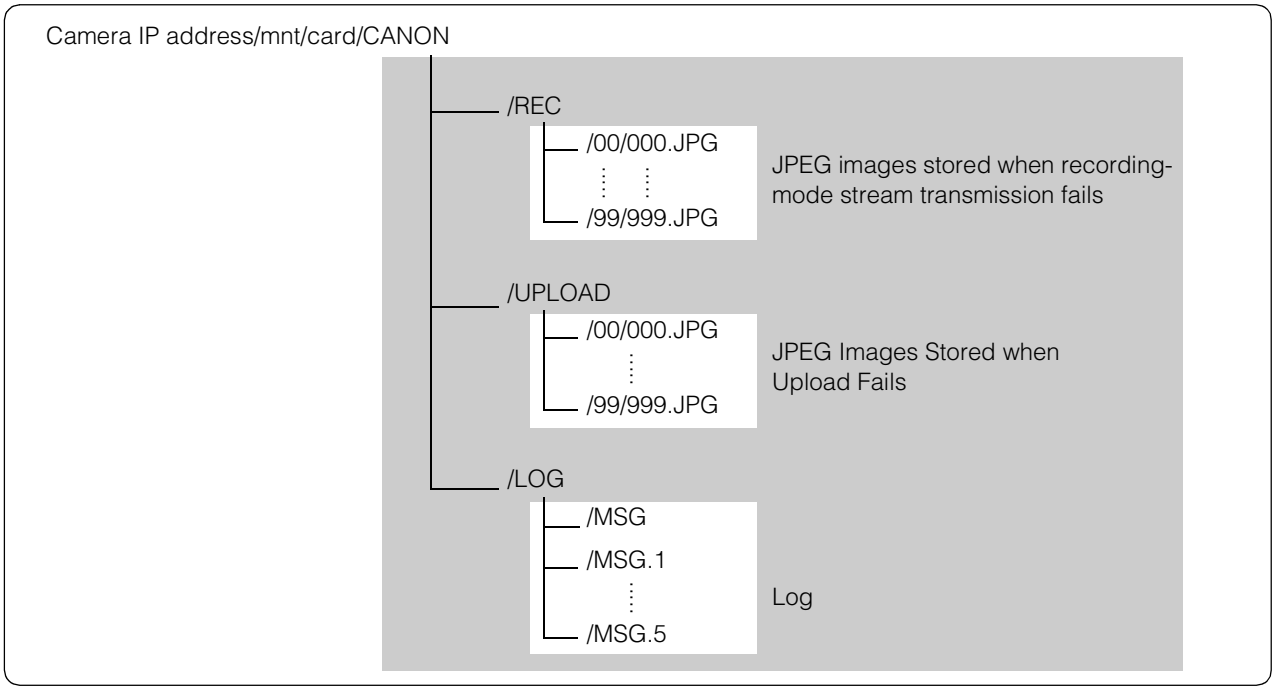
■ Access to the SD Memory Card

The SD memory card cannot be accessed by a web browser. Use the SD Card Utility (P. 1-3) or FTP software (not included) to access the camera using the camera's IP address.

FTP Software Settings

Address:	Camera IP address	(factory default setting: 192.168.100.1)
User ID:	Administrator user ID	(factory default setting: root)
Password:	Administrator password	(factory default setting: camera)

■ SD Memory Card Directory Configuration



SD Memory Card

■ JPEG Images Stored when Recording-Mode Stream Transmission Fails

The bundled SD Card Utility displays or deletes JPEG images saved on an SD memory card. It can also convert saved images into MOV files and save them to a computer.

Important

The SD card utility can only display, delete, or convert JPEG images of stream recordings that could not be transmitted due to network errors.

Recording-mode stream transmission JPEG images are saved under the file names “000.JPG” to “999.JPG” in subdirectories “00” to “99”, which are created under “<camera IP address>/mnt/card/CANON/REC”.
FTP software can be used to download JPEG images to a computer, but you will need to use the SD Card Utility (P. 1-3) to play back the images.
When either the storage capacity of the SD memory card or the number of files that can be saved in all subdirectories is reached, you cannot save further images to the SD memory card. If this happens, delete any unneeded JPEG images to free up capacity on the SD memory card.

■ JPEG Images Stored when Uploading Fails

JPEG images for which uploading failed are saved under the file names “000.JPG” to “999.JPG” in subdirectories “00” to “99”, which are created under “<camera IP address>/mnt/card/CANON/UPLOAD”.
FTP software can be used to download the JPEG images to a computer, but the images will be still image files. The images cannot be downloaded as files that can be played back as video.
When either the storage capacity of the SD memory card or the number of files that can be saved in all subdirectories is reached, you cannot save further images to the SD memory card. If this happens, delete any unneeded JPEG images to free up capacity on the SD memory card.

■ Log Files

Log files are saved in “<camera IP address>/mnt/card/CANON/LOG” with the file names “MSG” and “MSG.1” to “MSG.5”. “MSG” is the latest log.
Log files can be downloaded to a PC using FTP software, but you can use the Log Viewer in Admin Tools as a simple way to view and download log files.

Important

Canon will assume no liability for any accident or damage resulting from use of FTP software.

Modifiers

According to the setting item, you can specify parameters using modifier "% characters."

Modifiers	Meaning	Description of character string entered
%n	Reason for capture (number)	0 (test) | 1 (External device input 1) | 2 (External device input 2)| 33 (Timer event) | 145 (Volume detection) | 161 (Intelligent Function Detection Setting 1) | 162 (Intelligent Function Detection Setting 2) | 163 (Intelligent Function Detection Setting 3) | 164 (Intelligent Function Detection Setting 4) | 165 (Intelligent Function Detection Setting 5) | 166 (Intelligent Function Detection Setting 6) | 167 (Intelligent Function Detection Setting 7) | 168 (Intelligent Function Detection Setting 8) | 169 (Intelligent Function Detection Setting 9) | 170 (Intelligent Function Detection Setting 10) | 171 (Intelligent Function Detection Setting 11) | 172 (Intelligent Function Detection Setting 12) | 173 (Intelligent Function Detection Setting 13) | 174 (Intelligent Function Detection Setting 14) | 175 (Intelligent Function Detection Setting 15)
%N	Reason for capture (character string)	<External input device name (alphanumeric characters)> | <Intelligent Function Detection Setting (1 - 15)> | NULL (external input device name (alphanumeric characters) not yet set/volume detection/timer event or test)
%X	Width of image	Number of pixels in horizontal direction
%Y	Height of image	Number of pixels in vertical direction
%C	Camera number	1
%D	Camera name	Setting for [Camera Name (alphanumeric characters)]
%P	Pan position	M700 M600 0 M40 -179.99 - 180.00
%T	Tilt position	M700 M600 0 M40 -179.99 - 180.00
%Z	Zoom position	M700 M600 0 M40 0.01 - 300.00
%V	Camera server	VB-M700F / VB-M600D / VB-M600VE / VB-M40
%y	Year of capture time	2001 – 2031
%m	Month of capture time	01 – 12
%d	Day of capture time	01 – 31
%w	Day of week of capture time	0 – 6 (Sunday to Saturday)
%H	Hours of capture time	00 – 23
%M	Minutes of capture time	00 – 59
%S	Seconds of capture time	00 – 59
%s	Milliseconds of capture time	000 – 999
%z	Time zone of capture time	-1200 – +1300
%a	Weekday name of capture time	Sun | Mon | Tue | Wed | Thu | Fri | Sat
%b	Month name of capture time	Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec
%h	Host Name	

Note

- A runtime error will occur if the specified name does not match.
- If this modifier is not defined, "%" will be deleted.

■ Available Modifiers

The modifiers that can be used for each setting item are specified below.

[HTTP Upload] (P. 5-15)

[Parameter (query string)]
All modifiers can be used.

[FTP Upload] (P. 5-16)

[Subdirectory Name to Create]
Only the modifiers %y,%m,%d,%w,%H,%h,%n can be used.

[File Name to Create]
Only the modifiers %y,%m,%d,%w,%H,%M,%S,%s,%n can be used.

[E-mail Notification] (P. 5-17)

[Message Body]
All modifiers can be used.

Troubleshooting

Before contacting the dealer where you purchased the product or Canon's Customer Service Center, check the items specified as follows. If a log message is displayed, check the details of the message and corresponding countermeasure in the log message list.

Problem	Countermeasures
The camera does not start.	• If you are using a PoE HUB, check if the LAN cable is connected correctly. • If you are using an AC adapter (optional), check if the AC adapter is connected correctly. • Turn the camera off and on again (See “Connecting the Camera” in the “Installation Guide”).
VB Initial Setting Tool does not operate.	• Check if the LAN cable is connected correctly. • Turn the camera off and on again (See “Connecting the Camera” in the “Installation Guide”). The camera no longer responds to VB Initial Setting Tool 20 minutes after being turned on. • Check if the camera and the PC in which the VB Initial Setting Tool is operating are connected to the LAN in the same segment. • The VB Initial Setting Tool may not function when the [Windows Firewall] function is enabled. In this case, see “Notes on Use When the [Windows Firewall] Function is Enabled” (P. 1-8). • Check if you are using an older version of the VB Initial Setting Tool.
M700 M600 Camera Angle Setting Tool does not operate.	• Check if the LAN cable is connected correctly. • Check if the camera and the PC in which the Camera Angle Setting Tool is operating are connected to the LAN in the same segment. • “Application could not be started. Install .NET Framework 3.5 (SP1 or later).” If this message is displayed, install .NET Framework 3.5 (SP1 or later) or enable settings (P. 1-7).
The top page of the camera is not displayed.	• Check if the LAN cable is connected correctly. • Check if the network to which the camera is connected is set up correctly. In particular, check if the IP address, subnet mask and default gateway address are set within the ranges supported by the applicable network. • If you have changed the IP address, the new address will not become effective until the camera is rebooted. • Check if the correct URI (camera IP address) is entered in your web browser (P. 4-2, P. 5-32, P. 7-4).
The Admin Tools will not start. The Admin Viewer will not start.	• “Your web browser is not supported.” If this message is displayed, use Internet Explorer 7.0 or later. • “Application could not be started. Install .NET Framework 3.5 (SP1 or later).” If this message is displayed, install .NET Framework 3.5 (SP1 or later) or enable settings (See P. 1-7). • “JavaScript is not available or disabled on your web browser.” If this message is displayed, set [Active Script] to [Enable] in Internet Explorer's security settings. (See (2) below for instructions on how to set this.) • “Application could not be started. The following settings must be carried out to use the Admin Viewer and Admin Tools.” If this message is displayed, set the following. (1) Register your Admin Tools certificate (P. 4-3). (2) When using Internet Explorer 9 or greater, follow the steps in “Registering the Top Page of the Camera as a Trusted Site” (P. 1-8) and add this web site to [Trusted sites] in Internet Explorer's security settings. (3) In Internet Explorer click [Tools] > [Internet Options] > [Security] > [Custom level] and under the Security Settings list, set [XAML browser applications], [File download] and [Launching programs and files in an IFRAME] to [Enable].
Video is not displayed.	• To improve video quality, refer to “[Video] Setting Image Size, Quality and Frame Rate” in “Chapter 5 Setting Page” (P. 5-13) to change settings and make adjustments. • Up to 30 viewers can access the camera at the same time. If this limit has been exceeded, video is not displayed and a message appears.
M700 M600 The image is not displayed in the Viewer PTZ panel.	• If the [Maximum Number of Clients] is configured to 0 under [Image Server] in the Settings page, the image will not be displayed in the Viewer PTZ panel. Increase the number in [Maximum Number of Clients].

Problem	Countermeasures
M700 M600 The image disappears from the Viewer PTZ panel.	• The time that the image will be displayed in the Viewer PTZ panel is the time configured in [Maximum Connection Time (sec.)] under [Image Server] in the Settings page. If the value is set to 0, the connection time becomes unlimited. Take note, however, that this time affects not only the Viewer PTZ panel, but also the time that individual clients can connect to the camera.
There is no audio.	• If there is no audio, check the audio server settings of the camera and also check the sound and audio device settings for the PC. • If you are using the Admin Viewer with the administrator authorities, check if the camera is connected to the RM Viewer or another viewer that lets the administrator use audio. • Audio cannot be received if you are using a proxy server. • Audio cannot be used when connected via SSL encrypted communications. • Audio reception functions cannot be used during IPv6 connection. • Audio cannot be used if add-ons are not installed.
The camera cannot be controlled.	• If you connect the Admin Viewer as an administrator, you will have exclusive possession of the camera control privileges. If you connect to the Admin Viewer as an Authorized User, you cannot control the camera unless the administrator releases camera control. Consult the Administrator (P. 7-2).
The viewer gets disconnected.	• Check the network and PC for abnormality. • Reboot the PC and connect again.
You forgot your password.	• You can initialize all settings of the camera excluding date and time using the reset switch (P. 8-18). The administrator password required for initialization is “camera”. Note, however, that network settings such as the IP address and subnet mask will be initialized and must be set again.
Data cannot be uploaded.	• Check the upload destination in the [Upload] menu, as well as the upload operation upon event in the [Event] menu, to see if both are set correctly. • You can perform an operation check based on the currently set upload destination by running a test (P. 5-16) from the [Upload] menu. • Check [View Logs] in the [Maintenance] menu or logs on the server to check the detailed operating environment. For [View Logs], see “Application (uploader) messages” (P. 8-9). Also see “Important” in P. 5-15. • For the server settings, contact your System Administrator.
You cannot use recording-mode stream transmission.	• You cannot use recording-mode stream transmission if [Upload] in the [Upload] menu is set to HTTP or FTP. Set [Upload] to [Upload Disabled] (P. 5-15).
Files cannot be saved in the Settings page or Admin Tools.	• Saving to certain folders is prohibited in Windows 7 and Windows Vista and Windows Server 2008. Accordingly, an attempt to save a file may fail. Specify [Documents], [Pictures] and other folders.
M40 Black bars appear on panorama images.	• If you create or save panorama images while [Dome] is set to [Use] under [Installation Conditions] in the [Camera] menu, black bars will appear in the panorama images. Set [Dome] to [Do not use] when creating or saving panorama images, and return the setting to [Use] when necessary.

List of Log Messages

Log Messages on the Camera

Log messages are classified into the following types.

Category	Level	Code	Fault level
crit	Error	4xx	Software-level failure (Task operations will stop)
err	Error	3xx	Operational error (Operations will continue)
warning	Warning	2xx	Non-operational error
notice	Warning	1xx	Error external to the system
info	Information	0xx	Information on normal operation

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Category	Level	Code	Fault level
alert	Error	5xx	Hardware-level failure (System operations will stop)

Note

If no content is recorded in a log for approximately two hours, "-- MARK --" will be recorded in the message area.

■ Application (camera) messages

W001 Starting and stopping of system [info]

Description	%1 webview (W001)
%1	Starting or stopping
Meaning	wvhttp server (webview) has started or stopped.

W030 Startup and shutdown of WebView Livescope Client [info]

Description	%1%2 host=<Host>, user=<User>, prio=<Priority>(W030)
%1	W: WebView session, V: Session-less video client, N: Session-less event client
%2	+: Connect, -: Disconnect
Meaning	The camera server client was connected or disconnected.

W031 Transmitted video data size [info]

Description	%1= host=<Host>, user=<User>, video=<jpg | h264>:<Number of frames> (W031)
%1	W: WebView session, V: Session-less video client
Meaning	When a client disconnected, the total data that was sent to the client displayed in number of frames.

W040 Clearing to external memory [info]

Description	%1 the image storing - %2 (W040)
%1	Starting or stopping
%2	Reason for starting/stopping
Meaning	Started or stopped clearing stream recording to external memory.

W101 Invalid user name [notice]

Description	user <User name> not found (W101)
Meaning	The camera was accessed by an unauthorized user.

W102 Invalid password [notice]

Description	user <User name> password mismatch (W102)
Meaning	The password is invalid

W111 Invalid host [notice]

Description	host <IP Address> access denied (W111)
Meaning	The camera was accessed from a host from which access is prohibited.

W130 Buffer recovered [notice]

Description	stream buffer recovered (W130)
Meaning	Image buffer for stream recording has recovered.

W210 Camera operation discarded [warning]

Description	camera operation discarded (W210)
Meaning	Camera operation requested was discarded.

W230 Buffer overflow [warning]

Description	stream buffer overflowed (W230)
Meaning	The image buffer for the stream recording overflowed and images were discarded.

■ Application (uploader) messages

A004 Starting and stopping of uploader [info]

Description	%1 uploader (A004)
%1	Starting or stopping
Meaning	The uploader was started or stopped.

A040 Number of uploads (MAIL) [notice]

Description	uploader mail: normal=%1 test=%2 (A040)
%1	Number of normal uploads.
%2	Number of test uploads.
Meaning	Shows the number of uploads executed.

A041 Number of uploads (FTP) [notice]

Description	uploader ftp: normal=%1 test=%2 (A041)
%1	Number of normal uploads.
%2	Number of test uploads.
Meaning	Shows the number of uploads executed.

A042 Number of uploads (HTTP) [notice]

Description	uploader http: normal=%1 test=%2 (A042)
%1	Number of normal uploads.
%2	Number of test uploads.
Meaning	Shows the number of uploads executed.

A120 Resolution of upload destination name failed [notice]

Description	uploader cannot resolve the server name (A120)
Meaning	The name of the upload destination could not be resolved.

A121 Connection to upload destination failed [notice]

Description	uploader cannot connect the server (A121)
Meaning	Execution of connect to upload destination failed.

A122 Connection to upload destination failed [notice]

Description	uploader cannot connect the server (A122)
Meaning	The upload destination could not be connected due to a reason other than A120 and A121.

A134 Invalid upload setting (FTP/HTTP mode) [notice]

Description	ftp/http mode invalid. uploader set <none> forcibly (A134)
Meaning	The upload mode setting is invalid. The upload function was forcibly disabled.

A135 Invalid upload setting (FTP PORT/PASV mode) [notice]

Description	ftp port/pasv mode invalid. uploader set <pasv> forcibly (A135)
Meaning	The PORT/PASV mode setting in connection with FTP upload is invalid. The PASV mode was forcibly set.

A136 Invalid upload setting (HTTP notification only/ image mode) [notice]

Description	http notice/image mode invalid. uploader set <image> forcibly (A136)
Meaning	The notification only/image mode setting in connection with HTTP upload is invalid. The image mode was forcibly set.

A137 Invalid upload setting (E-mail notification) [notice]

Description	mode invalid. uploader set <none> forcibly (A137)
Meaning	The e-mail notification setting is invalid. E-mail notification was forcibly disabled.

A138 Invalid upload setting (E-mail notification authentication mode) [notice]

Description	authentication mode invalid. uploader set <smtp auth> forcibly (A138)
Meaning	The setting for e-mail notification authentication mode is invalid. “SMTP_AUTH” was forcibly set.

A271 E-mail communication buffer overflowed [warning]

Description	mail queue is full (A271)
Meaning	E-mails overflowed from the communication buffer.
Countermeasure	Make adjustments to reduce the number of event occurrences. Also adjust image quality and image size for upload.

A272 Upload communication buffer overflowed [warning]

Description	ftp/http queue is full (A272)
Meaning	Upload data overflowed from the communication buffer.
Countermeasure	Make adjustments to reduce the number of event occurrences. Also adjust the image quality, image size and frame rate for upload.

A273 Used buffer size is over maximum size [warning]

Description	used buffer size is over maximum size. (A273)
Meaning	The buffer reached maximum usage size.
Countermeasure	Adjust the image quality, image size and frame rate for upload.

A274 Event buffer for upload overflowed [warning]

Description	event queue is full (A274)
Meaning	Event buffer for upload overflowed.
Countermeasure	Make adjustments to reduce the number of event occurrences.

A275 Image buffer for upload overflowed [warning]

Description	buffer queue is full (A275)
Meaning	Image buffer for upload overflowed.
Countermeasure	Make adjustments to reduce the number of event occurrences. Also adjust the image quality, image size and frame rate for upload.

A470 Uploader initialization failed [crit]

Description	uploader initialization failure - %1 (A470)
%1	Error number
Meaning	The uploader could not be initialized.
Countermeasure	If the problem persists after rebooting the camera, the camera is faulty, arrange for servicing.

■ Application (audio server) messages

B001 Starting and shutdown of audio server [info]

Description	%1 audio. (B001)
%1	starting | stopping
Meaning	The audio server was started/shut down.

B011 Audio client connected [info]

Description	[%1] %2 connected n=%3 (B011)
%1	Client type (send | recv)
%2	Client host IP address
%3	Total number of clients
Meaning	An audio client was connected.

B012 Audio client closed [info]

Description	[%1] %2 closed n= %3 (B012)
%1	Client type (send | recv)
%2	Client host IP address
%3	Total number of clients
Meaning	An audio client was disconnected.

B101 Error request received [notice]

Description	%1 unusual request [%2] (B101)
%1	Client host IP address
%2	Error type (400 | 404 | ...)
Meaning	The request was denied due to a command error (400) or parameter error (404).

B102 Client connection denied [notice]

Description	%1 request denied [%2] (B102)
%1	Client host IP address
%2	Denial type (41 | 43 | ...)
Meaning	Client connection was denied due to an authentication error (41), time specification error (42), insufficient resource (43), specification of unsupported codec (45), specification of unpermitted user level (47), too many clients (49) or invalid operation mode (4a).
Countermeasure	41: Check user name, password or user list used when connecting. 42: Check playtime or maximum connection time settings used when connecting. 43: Reconnect or restart. 45: Use supported client software. 47: Check user level used when connecting. 49: Check client number settings. 4a: Check if usage of audio server is enabled.

B103 Client forcibly disconnected [notice]

Description	%1 access denied [%2] (B103)
%1	Client host IP address
%2	Denial type (41 | 42 | 4a)
Meaning	Connection was initially permitted, but the setting has subsequently been changed to prohibit access, thereby triggering a forced disconnection (the denial type is the same with B102).

B201 Event notification failure [info]

Description	cannot notify %1 event [%2] (B201)
%1	Event type (ald)
%2	Error number
Meaning	The event notification failed.

B202 Event reception failure [info]

Description	cannot recv event [%1] (B202)
%1	Error number
Meaning	The event could not be received.

B203 Audio message send error [info]

Description	audio message send error %1 [%2] (B203)
%1	Message type
%2	Error number
Meaning	The audio message could not be sent.

B204 Audio message reception failure [info]

Description	audio message recv error [%1:%2] (B204)
%1	Error notification number
%2	Cause of error
Meaning	The audio message could not be received.

B301 Audio device error [err]

Description	cannot use audio device for %1 [%2:%3] (B301)
%1	Transmission/reception type (rx | tx)
%2	Error handling (open | write | flush)
%3	Error number
Meaning	An audio device error was detected.
Countermeasure	If the error is not reset automatically, arrange for servicing.

B401 Audio device initialization failed [err]

Description	audio device initialization error [%1] (B401)
%1	Error number
Meaning	The audio device could not be initialized. The audio server stops.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

B402 Audio server initialization failed [err]

Description	audio initialization error [%1] (B402)
%1	Error number
Meaning	The audio server could not be initialized. The audio server stops.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

B403 Settings change failed [err]

Description	cannot set config [%1:%2] (B403)
%1	Error notification number
%2	Error number
Meaning	The settings could not be updated. The audio server stops.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

■ Application (video-related) messages

V001 Starting and shutdown of video server [info]

Description	%1 video (V001)
%1	Starting or stopping
Meaning	The video server was started/stopped.

V020 Starting intelligent service [info]

Description	starting intelligent. (V020)
Meaning	Intelligent service was started.

V020 Shutting down intelligence service [info]

Description	shutdown intelligent. (V020)
Meaning	Intelligent service was shut down.

V200 Video input warning [warning]

Description	video %1 warning - %2 (V200)
%1	Video number
%2	Error number
Meaning	An error that permits recovery of the video input system was detected.
Countermeasure	Change image size or Q value, or decrease data size for each JPEG image.

V320 Internal error in intelligent service [err]

Description	cannot work intelligent [%1] [%2] [%3] . (V320)
%1	Error number
%2	Cause of error
%3	Error information
Meaning	An internal error occurred in intelligent service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V321 Pseudo mode setting error in intelligent service [err]

Description	pseudo mode setting fail. (V321)
Meaning	An error occurred in the pseudo mode setting of intelligent service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V400 Video input initialization error [crit]

Description	video %1 initialization failure - %2 (%3) (V400)
%1	Video number
%2	Process description
%3	Error details
Meaning	The video input function was stopped because the video input system could not be initialized.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V401 Video input command error [crit]

Description	video %1 command error - %2 (%3) (V401)
%1	Video number
%2	Process description
%3	Error details
Meaning	The video input function was stopped because a video input command could not be processed.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V402 Video input frozen [crit]

Description	video %1 stalled (V402)
%1	Video number
Meaning	The video input function was stopped because video generation stopped.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V403 Video input error [crit]

Description	video %1 fatal error - %2 (V403)
%1	Video number
%2	Error number
Meaning	The video input function was stopped because an error that does not permit recovery of the video input system was detected.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V420 Could not start intelligent service [crit]

Description	intelligent initialization error [%1] [%2] . (V420)
%1	Error number
%2	Cause of error
Meaning	Failed to initialize intelligent service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

V421 Intelligent service error [crit]

Description	intelligent working error [%1] [%2] . (V421)
%1	Error number
Meaning	An error that does not permit recovery occurred while intelligent service was running.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

■ Application (SD card) messages

M001 Starting and stopping of SD control module [info]

Description	%1 sdctrl (M001)
%1	Starting or stopping
Meaning	The SD control module (sdctrl) has started or stopped.

■ HTTP Server Messages

H143 User name specification error [notice]

Description	(http_auth.c.XXX) get_password failed (H143)
Meaning	An unknown user was specified in user authentication.

H144 Password specification error [notice]

Description	(http_auth.c.XXX) password doesn't match for %1 %2, IP:%3 (H144)
%1	URL XSS vulnerability countermeasure implementation (process equivalent to ftpd)
%2	User Name
%3	IP address
Meaning	A wrong password was specified in user authentication.

H145 Connection denied due to host access limitation [notice]

Description	(mod_haccess.c.XXX) host %1 access denied (H145)
%1	IP address
Meaning	Connection was denied due to access limitation imposed on the host.

H201 Timeout disconnect [warning]

Description	a request for %1 timed out after writing %d seconds (H201)
%1	Request URI
%d	360 (Timeout time)
Meaning	Disconnected due to HTTP server timeout (360 sec.).

■ System messages

S001 System started [info]

Description	starting paramd (S001)
Meaning	Parameter management module started.

S002 System settings changed [info]

Description	Updated system settings. (S002)
Meaning	Settings not requiring rebooting were changed.

S010 Event service started [info]

Description	starting event (S010)
Meaning	The event service was started.

S011 Event service shut down [info]

Description	shutdown event (S011)
Meaning	The event service was shut down.

S012 External device service started [info]

Description	starting extio (S012)
Meaning	The external device input/output service was started.

S013 External device service shut down [info]

Description	shutdown extio (S013)
Meaning	The external device input/output service was shut down.

S014 Timer service started [info]

Description	starting timer (S014)
Meaning	The timer service was started.

S015 Timer service shut down [info]

Description	shutdown timer (S015)
Meaning	The timer service was shut down.

S070 Change to SSL certificate [info]

Description	ssl: succeeded to %1 certificate (S070)
%1	generate | load | delete | restore
Meaning	A certificate was generated/loaded/deleted/ restored
Countermeasure	None

S220 PAN/TILT operation warning [warning] (VB-M40)

Description	%1 warning detected. [%2] (S220)
1%	PAN | TILT
2%	Warning details
Meaning	An error occurred during operation or stopping of PAN/TILT.
Countermeasure	Check that the camera is not touching the dome, etc.

S240 Camera error [warning]

Description	serviceman call (S240)
Meaning	A camera error occurred.
Countermeasure	Camera needs to be serviced.

S250 PAN/TILT error [warning] (VB-M40)

Description	serviceman call (S250)
Meaning	An error occurred in the PAN/TILT area.
Countermeasure	Camera needs to be serviced.

S306 Error on saving settings [err]

Description	Can't update system settings (S306)
Meaning	An error generated while the system was saving setting. Setting could not be saved.
Countermeasure	Provide enough memory space by deleting unnecessary files in the user memory area, etc.

S307 Error on saving settings [err]

Description	(vbadmin.c XXX) Can't update system settings (S307)
Meaning	An error generated while the settings were saved by the setup protocol. Setting could not be saved.
Countermeasure	Provide enough memory space by deleting unnecessary files in the user memory area, etc.

S310 Working error in event service [err]

Description	cannot work event [%1] [%2] [%3] (S310)
%1	Error number
%2	Cause of error
%3	Error information
Meaning	An error occurred while the event service was running.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S311 Working error in external input/output service [err]

Description	cannot work extio [%1] [%2] [%3] (S311)
%1	Error number
%2	Cause of error
%3	Error information
Meaning	An error occurred while the external input/ output device service was running.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S312 Working error in timer service [err]

Description	cannot work timer [%1] [%2] [%3] (S312)
%1	Error number
%2	Cause of error
%3	Error information
Meaning	An internal error occurred in the timer service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S320 PAN/TILT operation error [err] (VB-M40)

Description	%1 error occurred. [%2] (S320)
1%	PAN | TILT
2%	Warning details
Meaning	An error occurred during operation or stopping of PAN/TILT.
Countermeasure	Check that the camera is not touching the dome, etc. If the error is not caused by problems such as contact with peripheral items, the camera needs to be serviced.

S410 Event service initialization error [crit]

Description	event initialization error [%1] [%2] (S410)
%1	Error number
%2	Cause of error
Meaning	An error occurred in the initialization of the event service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S411 External input/output service initialization error [crit]

Description	extio initialization error [%1] [%2] (S411)
%1	Error number
%2	Cause of error
Meaning	An error occurred in the initialization of the external input/output device service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S412 Timer service initialization error [crit]

Description	timer initialization error [%1] [%2] (S412)
%1	Error number
%2	Cause of error
Meaning	An error occurred in the initialization of the timer service.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S413 Timer service runtime error [crit]

Description	timer working error [%1] (S413)
%1	Error number
Meaning	An error occurred while the timer service was running.
Countermeasure	If the problem persists after rebooting, the camera is faulty. Arrange for servicing.

S501 Fan stop detected [alert] (VB-M600VE)

Description	FAN rotation speed is less than 150rpm. (S501)
Meaning	The camera's internal fan has stopped or RPM has dropped significantly.
Countermeasure	Camera needs to be serviced.

S502 Temperature fuse disconnect detected [alert] (VB-M600VE)

Description	Heater unit error. Fuse is cut off. (S502)
Meaning	The temperature fuse on the heater substrate was disconnected.
Countermeasure	Camera needs to be serviced.

List of Viewer Messages

Messages displayed in the Information Field

Messages displayed in the information field of the viewer are classified into the following three types.

Icon	Category	Explanation
	Information Message	Help messages on various buttons, pull-down lists, etc., as well as frame rate and other information from the camera are shown.
	Warning Message	A message will be displayed notifying the user when camera control privileges cannot be obtained, the audio session stops, etc.
	Error Message	Displayed when a system error occurs in the viewer.

■ Information Message

Message	Explanation
Connection closed by the camera.	The camera was disconnected.
Audio connection has been closed.	The video session has continued after the audio session was disconnected (applicable to both transmission and reception).
Camera control gained.	Displayed when camera control is obtained. You can operate the camera.
Camera control lost.	Displayed when camera control is released. You cannot operate the camera until you get camera control privileges again.

M40

Message	Explanation
{n}fps Pan : {p} Tilt : {t} Zoom : {z}	Communicating with the camera normally
{n}fps Pan : {p} Tilt : {t} Zoom : {z} IS: {Image Stabilizer value}	Communicating with the camera normally

■ Warning Message

Message	Explanation
Could not connect to the camera.	Connection failed due to an invalid IP address, etc.
The camera is busy.	The connection limit was exceeded.
Failed to get camera control privileges.	The request for camera control privileges was denied because the camera was being used by the Admin Viewer, etc.
Failed to establish audio connection.	Connection for audio reception failed.
You are not connected to the camera.	An attempt was made to operate the camera when the camera was not connected.
Please get camera control privileges.	An attempt was made to operate the camera without camera control privileges.
Another user is already connected as an administrator.	The Admin Viewer is already connected to the camera.
The viewer is already connected in another window.	The viewer is already available in another window.
Cookie is not available or blocked on your web browser.	Cookie is not available or blocked on your web browser.
JavaScript is not available or disabled on your web browser.	JavaScript is not available or blocked on your web browser.

Message	Explanation
No audio device.	The [Audio] button has been clicked when there is no audio device or the audio device has been disabled in the PC.
Failed to initialize Canon Network Camera Audio Receiver.	ActiveX plugin is not installed within ten seconds after clicking the [Audio] button.

M700 M600

Message	Explanation
Image display for Viewer PTZ use is restricted.	The image display for the Viewer PTZ is restricted by settings in the camera.

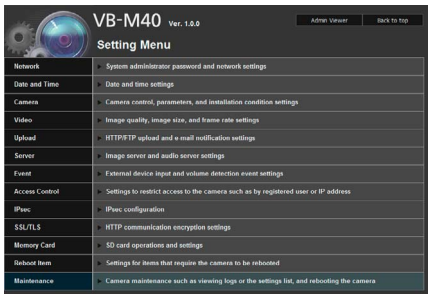
Restore Settings

It is recommended that you write down the settings for respective camera functions. If you have forgotten the settings and want to set the camera from the beginning, restore the factory default settings first.
*For factory default settings, see P. 8-20.

Restoring the Initial Setting from the Maintenance Page in the Web Browser

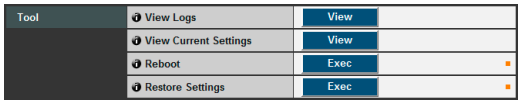
1 Launch the web browser and display the settings menu.

To display the settings menu, you need to enter the IP address of the camera, user name and administrator password (P. 4-2).


VB-M40 Ver. 1.0.0
Admin Viewer
Back to top
Setting Menu
Network
System administrator password and network settings
Date and Time
Date and time settings
Camera
Camera control, parameters, and installation condition settings
Video
Image quality, image size, and frame rate settings
Upload
HTTP/FTP upload and e-mail notification settings
Server
Image server and audio server settings
Event
External device input and volume detection event settings
Access Control
Settings to restrict access to the camera such as by registered user or IP address
IPsec
IPsec configuration
SSL/TLS
HTTP communication encryption settings
Memory Card
SD card operations and settings
Reboot Item
Settings for items that require the camera to be rebooted
Maintenance
Camera maintenance such as viewing logs or the settings list, and rebooting the camera

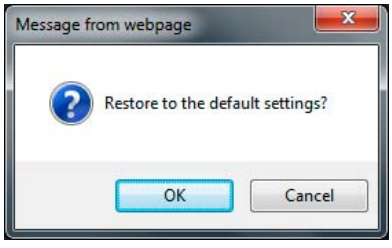
2 On the Setting Menu page, click [Maintenance].

The maintenance page appears.



3 Click [Exec] under [Restore Settings].

A confirmation message appears, asking if you want to restore the default settings. To restore the default settings, click [OK].



The camera will be reset to the factory default settings excluding the following items.

Administrator password for the camera
Maximum packet size
Network settings
Date, time and time zone
SSL certificate
Encrypted communications

Caution
• You must not turn off the camera while it is performing the [Restore Settings] operation. Turning off the camera at this stage may result in disabling its ability to boot correctly. • Once [OK] is clicked, you can no longer stop the process of restoring the default settings.

Restoring Factory Default Settings with the Reset Switch on the Camera

If you have forgotten or don't know the IP address of the camera or your Administrator password, you cannot operate the camera via the network. In this case, press the reset switch at the back of the camera.

1 For VB-M600D/VB-M600VE, remove the dome case.

For dome case removal, see the “VB-M600D/VB-M600VE Installation Guide.”

2 Turn off the camera.

There is no on/off switch on the camera. Turn the camera on and off by plugging in or unplugging LAN cable (PoE power supply), AC adapter, or external power plug.

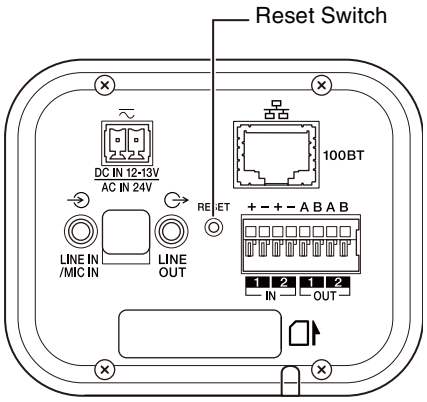
3 Turn on the power while pushing the reset switch, and keep pushing the reset switch for 5 seconds or more.

The reset switch is located in a recessed area. Push the switch using the tip of a slender object such as a clip.
All settings of the camera, except for the date and time, are restored to factory default settings.

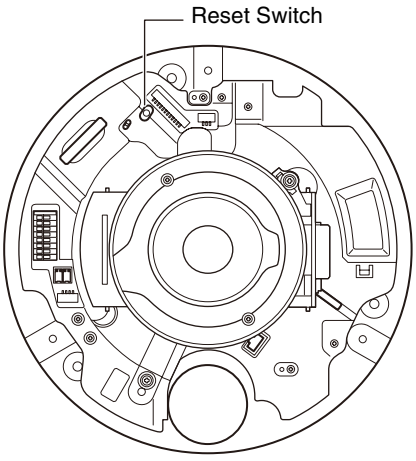
Important

If the reset switch is pushed, network-related settings will also be restored to factory default settings including the camera's IP address, subnet mask, default gateway address, etc. Accordingly, you can no longer operate the camera from the PC you were using to connect to the camera before. When initializing the camera, use the “VB Initial Setting Tool” installed in your PC to set an IP address appropriate for the environment in which the camera is used (See “Performing Initial Settings for the Camera” (P. 2-5)).

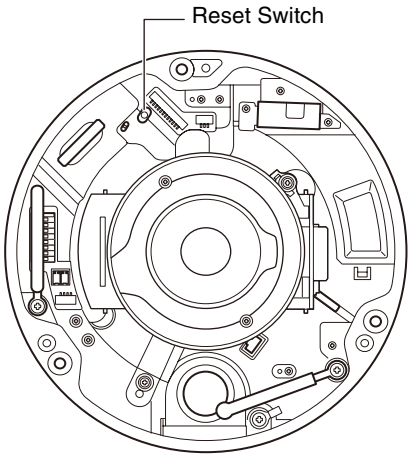
VB-M700F



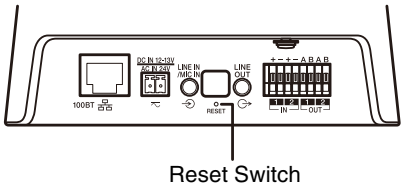
VB-M600D



VB-M600VE



VB-M40



4 For VB-M600D/VB-M600VE, attach the dome case.

For dome case attachment, see the “VB-M600D/VB-M600VE Installation Guide.”

List of Factory Default Settings

Item	Setting
• User Name (Administrator ID)	root
• Administrator password	camera
• Path to setting pages	admin
• LAN	
LAN Interface	Auto
Maximum Packet Size	1500
• IPv4	
IPv4 Address Setting Method	Manual
IPv4 Address	192.168.100.1
Subnet Mask	255.255.255.0
IPv4 Default Gateway Address	
• IPv6	
IPv6	Enable
Auto	Enabled
IPv6 Address (Manual)	
Prefix Length	64
IPv6 Default Gateway Address	
IPv6 Address (Auto)	
• DNS	
Name Server Address 1	
Name Server Address 2	
Host Name	
Host Name Registration with DDNS	Disable
• SNMP	
SNMP	Disable
Community Name	public
Administrator Contact Information	
Administration Function Name	M700 VB-M700 M600 VB-M600 M40 VB-M40
Installation Location	
• Current Date and Time	
• Setting	
Setting Method	Set manually
NTP Server	
Time Zone	(GMT+09:00) Osaka, Sapporo, Tokyo

Item	Setting
• Camera Name	
Camera Name (alphanumeric characters)	Camera
• Initial Camera Settings	
AE Mode	Auto
Slow Shutter	Disable
Shutter Speed	1/100
Exposure Compensation	0
Metering Mode	Center-Weighted
Smart Shade Control	Disable
White Balance	Auto
R Gain	255
B Gain	255
• Camera Control M40	
Digital Zoom	Disable
Image Stabilizer	Disable
• Day/Night	
Mode	Manual
Switching Brightness	Standard
Response (sec.)	20
• Installation Conditions	
Dome M40	Do not use
LED Setting M700 M40	Turn On
Image Flip M40	Disable
• Camera Position Control M40	
Restricted to Presets	No Restriction
Camera Position without Control	Do not return to Home Position
• External Input Device 1 Device Name (alphanumeric characters)	
• External Input Device 2 Device Name (alphanumeric characters)	
• External Output Device 1 Device Name (alphanumeric characters)	
• External Output Device 2 Device Name (alphanumeric characters)	

Item	Setting
• Initial Camera Settings	
Intelligent Function Information	Do not add
• JPEG	
Image Quality: 160 x 120	3
Image Quality: 320 x 240	3
Image Quality: 640 x 480	3
Image Quality: 1280 x 960	3
Image Size: Image Transmission	320 x 240
Maximum Frame Rate: Image Transmission	30.0
Image Size: Upload	320 x 240
• H.264	
Bit rate Control	Use bit rate control
Video Quality	3
Target Bit Rate (kbps)	1024
Video Size	320 x 240
Frame Rate (fps)	30
• On-screen display	
Date display	Disable
Position of date display	Upper left
Format of date display	YYYY/MM/DD
Time display	Disable
Position of time display	Upper left
Text display	Display nothing
Position of text display	Upper left
Text string display	
Color of text	Black
Color of text outline	White
Color depth of text and outline	Fill text and outline

Item	Setting
• General Upload	
Upload	Upload Disabled
• HTTP Upload	
Notification	Notification Only with HTTP
URI	
User Name	
Password	
Proxy Server	
Proxy Port	80
Proxy User Name	
Proxy Password	
Parameter (query string)	
• FTP Upload	
Notification	Image data upload with FTP
FTP Server	
User Name	
Password	
PASV Mode	Enable
File Upload Path	
File Naming	YYMMDDHHMMSSms
Subdirectory Name to Create	
File Name to Create	image.jpg
Maximum Number of Loops	0
• E-mail Notification	
Notification	Text Only
Mail Server Name	
Mail Server Port	25
Sender (From)	
Recipient (To)	
Authentication	None
User Name	
Password	
POP Server	
Subject	
Message Body	

Item	Setting
• Image Server	
Maximum Number of Clients	30
Camera Control Queue Length	30
Maximum Connection Time (sec.)	0
Camera Control Time (sec.)	20
• Audio Server	
Audio Transmission from the Camera	Disable
Input Volume	50
Voice Activity Detection	Disable
Audio Reception from the Viewer	Disable
Output Volume	50
Echo Canceller	Disable
Audio Input	Line In
• HTTP Server	
Authentication Method	Basic Authentication
HTTP Port	80
HTTPS Port	443
Global Address for the Web Page	IP Address
IPv4 Address (global address for the web page)	
Port Number (global address for the web page)	
• Image Buffer	
Frame Rate	1
Pre-event Buffer (number of image frames)	0
Post-event Buffer (number of image frames)	0
• Volume Detection	
Volume Detection Event	Disable
Detection Criteria	The reference volume level or above
Reference Volume Level	50
Detect Criteria Duration (sec.)	0
ON Event Operation	Disable
OFF Event Operation	Disable
Preset M40	None
Upload	Disable
E-mail Notification	Disable
• External Device Input	
External Device Input Event	Enable
• External Device Input 1	
ON/OFF Input Inversion	Disable
ON Event Operation	Disable
OFF Event Operation	Disable
Preset M40	None
Upload	Disable
E-mail Notification	Disable
Audio Playback at ON Event	Disable
Audio Playback at OFF Event	Disable
Sound Clip	
Volume	50

Item	Setting
• External Device Input 2	
ON/OFF Input Inversion	Disable
ON Event Operation	Disable
OFF Event Operation	Disable
Preset M40	None
Upload	Disable
E-mail Notification	Disable
Audio Playback at ON Event	Disable
Audio Playback at OFF Event	Disable
Sound Clip	
Volume	50
• Timer	
Timer Event Setting 1	Disable
Start Time	00:00
Repeat Setting	Disable
Repeat Interval	1 sec.
Repeat Count	1
Timer Event Setting 2	Disable
Start Time	00:00
Repeat Setting	Disable
Repeat Interval	1 sec.
Repeat Count	1
Timer Event Setting 3	Disable
Start Time	00:00
Repeat Setting	Disable
Repeat Interval	1 sec.
Repeat Count	1
Timer Event Setting4	Disable
Start Time	00:00
Repeat Setting	Disable
Repeat Interval	1 sec.
Repeat Count	1
Upload	Disable
E-mail Notification	Disable
• Sound Clip Upload 1	
Browse File	
Sound Clip Name	
• Sound Clip Upload 2	
Browse File	
Sound Clip Name	
• Sound Clip Upload 3	
Browse File	
Sound Clip Name	

Item	Setting
• Authorized User Account	
User Name	
Password	
User List	
• User Authority	
Authorized User	
Privileged Camera Control	Checked
Camera Control	Checked
Image Distribution	Checked
Audio Distribution	Checked
Guest User	
Camera Control	Checked
Image Distribution	Checked
Audio Distribution	Checked
• IPv4 Host Access Restrictions	
Apply Host Access Restrictions	Disable
Default Policy	Authorize Access
Network Address / Subnet	01: / 32 Authorize
	02: / 32 Authorize
	03: / 32 Authorize
	04: / 32 Authorize
	05: / 32 Authorize
	06: / 32 Authorize
	07: / 32 Authorize
	08: / 32 Authorize
	09: / 32 Authorize
	10: / 32 Authorize
	11: / 32 Authorize
	12: / 32 Authorize
	13: / 32 Authorize
	14: / 32 Authorize
	15: / 32 Authorize
	16: / 32 Authorize
	17: / 32 Authorize
	18: / 32 Authorize
	19: / 32 Authorize
	20: / 32 Authorize
• IPv6 Host Access Restrictions	
Apply Host Access Restrictions	Disable
Default Policy	Authorize Access
Prefix / Prefix Length	01: / 128 Yes
	02: / 128 Yes
	03: / 128 Yes
	04: / 128 Yes
	05: / 128 Yes
	06: / 128 Yes
	07: / 128 Yes
	08: / 128 Yes
	09: / 128 Yes
	10: / 128 Yes
	11: / 128 Yes
	12: / 128 Yes
	13: / 128 Yes
	14: / 128 Yes
	15: / 128 Yes
	16: / 128 Yes
	17: / 128 Yes
	18: / 128 Yes
	19: / 128 Yes
	20: / 128 Yes

Item	Setting
• IPsec	
IPsec	Auto Key Exchange
• Auto Key Exchange Settings	
IPsec SA Encryption Algorithm	AES->3DES
IPsec SA Authentication Algorithm	HMAC_SHA1_96
IPsec SA Validity Period (min)	480
ISAKMP SA Encryption Algorithm	AES->3DES
ISAKMP SA Authentication Algorithm	SHA1
DH Group	Group 2
ISAKMP SA Validity Period (min)	480
• IPsec Set 1	
IPsec Set	Disable
IPsec Mode	Tunnel Mode
Destination IPv4 Address	
Destination IPv6 Address	
Source IPv4 Address	
Sender IPv6 Address	
Security Protocol	ESP
Security Gateway IPv4 Address	
Security Gateway IPv6 Address	
Destination Subnet Mask Length	16
Destination Prefix Length	16
IKE Pre-Shared Key	
SA ESP Encryption Algorithm	AES
SA ESP Authentication Algorithm	HMAC_SHA1_96
SA ESP Encryption Key (outbound)	
SA ESP Authentication Key (outbound)	
SA ESP SPI (outbound)	
SA ESP Encryption Key (inbound)	
SA ESP Authentication Key (inbound)	
SA ESP SPI (inbound)	
SA AH Authentication Algorithm	HMAC_SHA1_96
SA AH Authentication Key (outbound)	
SA AH SPI (outbound)	
SA AH Authentication Key (inbound)	
SA AH SPI (inbound)	

Item	Setting
• IPsec Set 2	
IPsec Set	Disable
IPsec Mode	Tunnel Mode
Destination IPv4 Address	
Destination IPv6 Address	
Source IPv4 Address	
Sender IPv6 Address	
Security Protocol	ESP
Security Gateway IPv4 Address	
Security Gateway IPv6 Address	
Destination Subnet Mask Length	16
Destination Prefix Length	16
IKE Pre-Shared Key	
SA ESP Encryption Algorithm	AES
SA ESP Authentication Algorithm	HMAC_SHA1_96
SA ESP Encryption Key (outbound)	
SA ESP Authentication Key (outbound)	
SA ESP SPI (outbound)	
SA ESP Encryption Key (inbound)	
SA ESP Authentication Key (inbound)	
SA ESP SPI (inbound)	
SA AH Authentication Algorithm	HMAC_SHA1_96
SA AH Authentication Key (outbound)	
SA AH SPI (outbound)	
SA AH Authentication Key (inbound)	
SA AH SPI (inbound)	
• IPsec Set 3	
IPsec Set	Disable
IPsec Mode	Tunnel Mode
Destination IPv4 Address	
Destination IPv6 Address	
Source IPv4 Address	
Sender IPv6 Address	
Security Protocol	ESP
Security Gateway IPv4 Address	
Security Gateway IPv6 Address	
Destination Subnet Mask Length	16
Destination Prefix Length	16
IKE Pre-Shared Key	
SA ESP Encryption Algorithm	AES
SA ESP Authentication Algorithm	HMAC_SHA1_96
SA ESP Encryption Key (outbound)	
SA ESP Authentication Key (outbound)	
SA ESP SPI (outbound)	
SA ESP Encryption Key (inbound)	
SA ESP Authentication Key (inbound)	
SA ESP SPI (inbound)	
SA AH Authentication Algorithm	HMAC_SHA1_96
SA AH Authentication Key (outbound)	
SA AH SPI (outbound)	
SA AH Authentication Key (inbound)	
SA AH SPI (inbound)	

Item	Setting
• IPsec Set 4	
IPsec Set	Disable
IPsec Mode	Tunnel Mode
Destination IPv4 Address	
Destination IPv6 Address	
Source IPv4 Address	
Sender IPv6 Address	
Security Protocol	ESP
Security Gateway IPv4 Address	
Security Gateway IPv6 Address	
Destination Subnet Mask Length	16
Destination Prefix Length	16
IKE Pre-Shared Key	
SA ESP Encryption Algorithm	AES
SA ESP Authentication Algorithm	HMAC_SHA1_96
SA ESP Encryption Key (outbound)	
SA ESP Authentication Key (outbound)	
SA ESP SPI (outbound)	
SA ESP Encryption Key (inbound)	
SA ESP Authentication Key (inbound)	
SA ESP SPI (inbound)	
SA AH Authentication Algorithm	HMAC_SHA1_96
SA AH Authentication Key (outbound)	
SA AH SPI (outbound)	
SA AH Authentication Key (inbound)	
SA AH SPI (inbound)	
• IPsec Set 5	
IPsec Set	Disable
IPsec Mode	Tunnel Mode
Destination IPv4 Address	
Destination IPv6 Address	
Source IPv4 Address	
Sender IPv6 Address	
Security Protocol	ESP
Security Gateway IPv4 Address	
Security Gateway IPv6 Address	
Destination Subnet Mask Length	16
Destination Prefix Length	16
IKE Pre-Shared Key	
SA ESP Encryption Algorithm	AES
SA ESP Authentication Algorithm	HMAC_SHA1_96
SA ESP Encryption Key (outbound)	
SA ESP Authentication Key (outbound)	
SA ESP SPI (outbound)	
SA ESP Encryption Key (inbound)	
SA ESP Authentication Key (inbound)	
SA ESP SPI (inbound)	
SA AH Authentication Algorithm	HMAC_SHA1_96
SA AH Authentication Key (outbound)	
SA AH SPI (outbound)	
SA AH Authentication Key (inbound)	
SA AH SPI (inbound)	

Item	Setting
• Certificates Certificate Status Country (C) State/Province (ST) Locality (L) Organization (O) Organizational Unit (OU) Common Name (CN) Validity Period Start Date Validity Period End Date • Encrypted Communications SSL Communications	 Not Installed Disable
• SD Card Operations Operation Settings • SD Card Information SD Card Recognition	 Save Log SD Card Not Inserted

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